Supplemental Table 3. Eligible Studies and Participant Characteristics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Reference | Country, Single or Multicenter | Study Design | Study Duration | Acute Care Hospital Setting | N of Study Patients | Mean Age (SD) |
| Al-Jaghbeer et al. 2018 | USA, multi | Pre-post study | 3 years | Floor (medical, surgical) | 528,108 | 59 (20) |
| Bailey et al. 2013 | USA, single | Cluster-randomized controlled trial | 1 year | Floor (medicine) | 20,031 | 57 (37.8) |
| Berger et al. 2010 | USA, single | Pre-post study | 1 year | ED | 1,798 | 54 (18.5) |
| Bourdeaux et al. 2020 | UK, multi | Pre-post study | 2 years | ICU (medical/surgical, cardiac) | 5,044 | 63.3 (14.8) |
| Colpaert et al. 2012 | Belgium, single | Pre-post study | 6 months | ICU (medical, surgical) | 951 | 61.3 (34.4) |
| Escobar et al. 2020 | USA, multi | Pre-post study | 3.5 years | Floor (medical, surgical) | 37,071 | 66.9 (16.0) |
| Evans et al. 2014 | USA, single | Pre-post study | 2 years | Floor (medical, oncology, surgical, trauma) | 12,881 | 55.7 (no SD provided) |
| Fogerty et al. 2019 | USA, single | Pre-post study | 1.2 years | Floor (medical) | 16,766 | NA |
| Gatewood et al. 2015 | USA, single | Pre-post study | 3.3 years | ED | 1,032 | NA |
| Giannini et al. 2019 | USA, multi | Pre-post study | 1.2 years | Floor (different types) | 54,464 | 58.6 (no SD provided) |
| Heller et al. 2020 | Germany, single | Pre-post study | 2 years | Floor (surgical) | 3,827 | 64.9 (15.3) |
| Hooper et al. 2012 | USA, single | Randomized controlled trial | 4 months | ICU (medical) | 442 | 54.5 (18) |
| Horton et al. 2020 | USA, single | Pre-post study (interrupted time series) | 2 years | Floor (internal medicine, oncology, neurology, psychiatry, inpatient rehab) | 23,078 | 56.0 (17.7) |
| Huff et al. 2018 | USA, single | Pre-post study | 4 months | Floor (medical, surgical, progressive care) | 245 | NA |
| Kollef et al. 2014 | USA, single | Randomized controlled trial | 4 months | Floor (medicine) | 571 | 63.4 (15.7) |
| Kollef et al. 2017 | USA, single | Pre-post study | 12 years | Floor (general medicine) | 163,311 | NA |
| Manaktala et al. 2017 | USA, single | Pre-post study | 3.6 years | Floor (respiratory, general medicine) | 778 | 63.7 (0.52) |
| McCoy et al. 2017 | USA, multi | Pre-post study | 1.5 years | Mixed (ED, ICU, medical and surgical floor) | 1,382 | NA |
| Mestrom et al. 2019 | Netherlands, single | Pre-post study | 3.5 years | Floor (surgical high dependency) | 594 | 67 (15.5) |
| Olchanski et al. 2017 | USA, single | Pre-post study | 2 years | ICU (mixed, medical, surgical, cardiovascular) | 1,839 | 63.3 (16.8) |
| Park et al. 2018 | Korea, single | Pre-post study | 2 years | Floor (surgical, non-surgical | 3,193 | 65.6 (35.0) |
| Pickering et al. 2015 | USA, single | Step-wedge cluster randomized trial | 2.5 months | ICU (surgical, medical, mixed) | 1,534 | 62.3 (18.0) |
| Sawyer et al. 2011 | USA, single | Pre-post study | 9 months | Floor (medicine) | 270 | 51.9 (17.5) |
| Subbe et al. 2017 | UK, single | Pre-post study | 1.6 years | Floor (gastro, pulmo) | 4,402 | 68.8 (17.2) |
| Umscheid et al. 2015 | USA, multi | Pre-post study | 6 months | Floor (different types) | 31,093 | 60.9 (33.7) |
| Vizcaychipi et al. 2020 | UK, single | Pre-post study | 3 months | Mixed (ICU, general floor) | 939 | 67 (54–81) |
| Weller et al. 2017 | USA, single | Pre-post study | 10 months | Floor (neurologic/neurosurgical) | 1,958 | 60.0 (15.0) |
| Wilson et al. 2015 | USA, single | Randomized controlled trial | 7 months | Mixed (ICU, general and surgical floor) | 2,393 | 61 (16) |
| Wilson et al. 2021 | USA, multi | Randomized controlled trial | 1.8 years | Mixed (ED, ICU, floor) | 6,030 | 71 (34.1) |
| Wu et al. 2018 | China, single | Randomized controlled trial | 5 months | Mixed (ICU, cardiovascular floor) | 975 | 63 (26.7) |
| *Abbreviations:* N = number; SD = standard deviation; ED = emergency department; ICU = intensive care unit | | | | | | |