**Supplemental Table 9. Study Design of Randomized Controlled Trial used for “standardized and/or protocol-based (analgesia/analgosedation) pain assessment and management programs” Recommendation**

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| Trial | Outcomes assessed | Study Population | Intervention | Control |
| Breen D, Karabinis A, Malbrain M, et al. *Crit Care* 2005;9:R200-10 [1] | MV duration; ICU LOS; Dose of sedatives; dose of opioids | Medical/surgical ICU | Remifentanil-based sedation (57 patients) | Midazolam-based sedation (48 patients) |
| Brook AD, Ahrens TS, Schaiff R, et al. *Crit Care Med* 1999;27:2609-2615 [2] | MV duration, ICU LOS | Medical ICU | Protocolized pain and sedation assessment and treatment (162 patients)  | Tradition practice (159 patients) |
| Karabinis A, Mandragos K, Stergiopoulos S, et al: *Crit Care* 2004;8:R268-80 [3] | MV duration, PIS, opioid exposure, sedative exposure, CV ADR | Neurointensive care unit with brain injury | Analgesia-based sedation with remifentanil (84 patients) | Standard hypnotic-based regimen (77 patients) |
| Rozendaal FW, Spronk PE, Snellen FF, et al: *Intensive Care Med* 2009;35:291-298 [4] | Pain intensity scores, ICU LOS, MV duration, sedative exposure, opioid exposure, CV ADR | Medical/surgical ICU | Remifentanil-propofol-based (96 patients) | Conventional practice (109 patients) |
| Strom T, Martinussen T, Toft P: *Lancet* 2010;375:475-480 [5] | ICU LOS, sedative exposure, opioid exposure, nosocomial infection, MV duration | Medical/surgical ICU | Analgesia-first, no sedation (55 patients) | Conventional sedation with daily sedation interruption (58 patients) |

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