Evidence Table D-38. Mortality outcomes for studies comparing interventions to treat delirium

| Author, year | Population | Intervention group, n | Control group, n | Route of administration | Outcome definition | n / N (%), intervention group | n / N (%), control group | Relative risk (95% CI) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| First-generation antipsychotic vs. placebo |  |  |  |  |  |  |  |  |
| Agar, 2017[17](#_ENREF_17) | Patients in Hospice and palliative care with delirium | Haloperidol (Max dose: 4 mg/d), 81 | Placebo (Max dose: 4 mg/day), 84 | Oral | Died during study period | 9 / 81 (11.1%) | 9 / 84 (10.7%) | 1.17 (0.47 to 2.88) |
| Girard, 2010[4](#_ENREF_4) | > 18 years MV medical and surgical ICU patients | Haloperidol (Planned dose: 5 Median dose: 15 (10.8-17), 35 | Placebo (Planned dose: 5ml), 36 | Oral | 21-day mortality, n (%) | 4 / 35 (11%) | 6 / 36 (17%) | 0.69 (0.21 to 2.22) |
| Girard, 2018[29](#_ENREF_29) | Patients over 18 years of age in the medical or surgical ICU, with delirium | Haloperidol (Mean dose: 11mg Dose range: 2.5-20mg), 192 | Placebo (Not reported), 184 | Intravenous | Death at 30 days | 50 / 192 (26%) | 50 / 184 (27%) | 0.96 (0.69 to 1.34) |
| Girard, 2018[29](#_ENREF_29) | Patients over 18 years of age in the medical or surgical ICU, with delirium | Haloperidol (Mean dose: 11mg Dose range: 2.5-20mg), 192 | Placebo (Not reported), 184 | Intravenous | Death at 90 days | 73 / 192 (38%) | 63 / 184 (34%) | 1.11 (0.85 to 1.45) |
| Page, 2013[10](#_ENREF_10) Drinkwater, 2014[27](#_ENREF_27) | ICU patients needing MV within 72 hours of admission were enrolled | Haloperidol (Planned dose: 2.5mg), 71 | Placebo (Planned dose: 0.5ml), 70 | Intravenous |   | 20 / 71 (28.2%) | 19 / 70 (27.1%) | 1.04 (0.61 to 1.77) |
|  Second-generation antipsychotic vs. placebo |   |   |   |   |   |   |   |   |
| Agar, 2017[17](#_ENREF_17) | Patients in Hospice and palliative care with delirium | Risperidone (Max dose: 4 mg/d), 82 | Placebo (Max dose: 4 mg/day), 84 | Oral | died during study period | 16 / 82 (19.5%) | 9 / 84 (10.7%) | 1.82 (0.85 to 3.89) |
| Devlin, 2010[26](#_ENREF_26) | Patients admitted to Medical & Surgical ICU with delirium. | Quetiapine (Mean dose: 50 Median dose: 110 (88-191 IQR) Max dose: 200 Dose range: 50 to 200mg), 18 | Placebo (Mean dose: 50 Median dose: 210 (116 - 293) Max dose: 200mg), 18 | Either orally or NG tube | %, Hospital Mortality | 2 / 18 (11%) | 3 / 18 (17%) | 0.67 (0.13 to 3.53) |
| Girard, 2010[4](#_ENREF_4) | > 18 years MV medical and surgical ICU patients | Ziprasidone (Planned dose: 40 Median dose: 113 (81-140), 30 | Placebo (Planned dose: 5ml), 36 | Oral | 21-day mortality, n (%) | 4 / 30 (13%) | 6 / 36 (17%) | 0.80 (0.25 to 2.57) |
| Girard, 2018[29](#_ENREF_29) | Patients over 18 years of age in the medical or surgical ICU, with delirium | Ziprasidone (Mean dose: 20mg Dose range: 5.0-40mg), 190 | Placebo (Not reported), 184 | Intravenous | Death at 30 days | 53 / 190 (28%) | 50 / 184 (27%) | 1.03 (0.74 to 1.43) |

| Author, year | Population | Intervention group, n | Control group, n | Route of administration | Outcome definition | n / N (%), intervention group | n / N (%), control group | Relative risk (95% CI) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Girard, 2018[29](#_ENREF_29) | Patients over 18 years of age in the medical or surgical ICU, with delirium | Ziprasidone (Mean dose: 20mg Dose range: 5.0-40mg), 190 | Placebo (Not reported), 184 | Intravenous | Death at 90 days | 65 / 190 (34%) | 63 / 184 (34%) | 1.00 (0.75 to 1.32) |
| Tahir, 2010[59](#_ENREF_59) | Patients in medical, surgical and orthopedic wards, who met the DSM-IV criteria for delirium on the same day if they had a DRS-R-98 total score of 15 or more | Quetiapine (Mean dose: 40 Dose range: 25 - 175mg), 21 | Placebo (Mean dose: 25 Max dose: 175mg), 21 | Oral | Death within 30 days of entering the study | 4 / 21 (19%) | 3 / 21 (%) | 1.33 (0.34 to 5.24) |
| Tahir, 2010[59](#_ENREF_59) | Patients in medical, surgical and orthopedic wards, who met the DSM-IV criteria for delirium on the same day if they had a DRS-R-98 total score of 15 or more | Quetiapine (Mean dose: 40 Dose range: 25 - 175mg), 21 | Placebo (Mean dose: 25 Max dose: 175mg), 21 | Oral | Deaths before the completion of study | 3 / 21 (14.3%) | 1 / 21 (4.8%) | 3.00 (0.34 to 26.56) |
|  First-generation antipsychotic vs. first-generation antipsychotic |   |   |   |   |   |   |   |   |
| Breitbart, 1996[22](#_ENREF_22) | Medically hospitalized adult patients with AIDS and a DRS score of 13 or greater (delirium) | Haloperidol (Planned dose: oral: 0.25-5.0mg, Intramuscular: 0.125-3.0mg Mean dose: 1.4 Dose range: 0.4 - 3.6mg), 11 | Chlorpromazine (Planned dose: Oral: 10-200mg, Intramuscular: 5-100mg Mean dose: 36 Dose range: 10-80mg), 13 | Oral or intramuscular |   | 2 / 11 (18.2%) | 2 / 13 (15.4%) | 1.18 (0.20 to 7.06) |
|  First-generation antipsychotic vs. second-generation antipsychotic |   |   |   |   |   |   |   |   |
| Agar, 2017[17](#_ENREF_17) | Patients in Hospice and palliative care with delirium | Risperidone (Max dose: 4 mg/d), 82 | Haloperidol (Max dose: 4 mg/d), 81 | Oral | died during study period | 16 / 82 (19.5%) | 9 / 81 (11.1%) | 1.76 (0.82 to 3.74) |
| Girard, 2010[4](#_ENREF_4) | > 18 years MV medical and surgical ICU patients | Ziprasidone (Planned dose: 40 Median dose: 113 (81-140), 30 | Haloperidol (Planned dose: 5 Median dose: 15 (10.8-17), 35 | Oral | 21-day mortality, n (%) | 4 / 30 (13%) | 4 / 35 (11%) | 1.17(0.32 to 4.27) |
| Girard, 2018[29](#_ENREF_29) | Patients over 18 years of age in the medical or surgical ICU, with delirium | Ziprasidone (Mean dose: 20mg Dose range: 5.0-40mg), 190 | Haloperidol (Mean dose: 11mg Dose range: 2.5-20mg), 192 | Intravenous | Death at 30 days | 53 / 190 (28%) | 50 / 192 (26%) | 1.07 (0.77 to 1.49) |
| Girard, 2018[29](#_ENREF_29) | Patients over 18 years of age in the medical or surgical ICU, with delirium | Ziprasidone (Mean dose: 20mg Dose range: 5.0-40mg), 190 | Haloperidol (Mean dose: 11mg Dose range: 2.5-20mg), 192 | Intravenous | Death at 90 days | 65 / 190 (34%) | 73 / 192 (38%) | 0.90 (0.69 to 1.18) |

| Author, year | Population | Intervention group, n | Control group, n | Route of administration | Outcome definition | n / N (%), intervention group | n / N (%), control group | Relative risk (95% CI) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grover, 2011[30](#_ENREF_30) | Consecutive patients >-18 years old referred to psychiatry and diagnosed with delirium | Risperidone (Mean dose: 0.95mg Dose range: 0.5-2.0mg per day), 22 | Haloperidol (Mean dose: 0.88 Dose range: 0.25-5mg per day), 26 | Oral |   | 0 / 22 (0%) | 0 / 26 (0%) |   |
| Grover, 2011[30](#_ENREF_30) | Consecutive patients >-18 years old referred to psychiatry and diagnosed with delirium | Olanzapine (Mean dose: 3.05mg Dose range: 1.25-10 mg per day), 26 | Haloperidol (Mean dose: 0.88 Dose range: 0.25-5mg per day), 26 | Oral |   | 0 / 26 (0%) | 0 / 26 (%0) |   |
| Jain, 2017[38](#_ENREF_38) | Medical and surgical inpatients | Olanzapine (Mean dose: 5.49mg), 66 | Haloperidol (Mean dose: 2.10mg), 66 | Oral | Not applicable | 9 / 66 (13.6%) | 7 / 66 (10.6%) | 1.29 (0.51 to 3.25) |
| Maneeton, 2013[49](#_ENREF_49) | General adult population (age 18-75) with hyperactive delirium, referred to psychiatry consult liaison service at tertiary care hospital in Thailand | Quetiapine (Mean dose: 67.6 (SD 9.7) Dose range: 25-100mg), 24 | Haloperidol (Mean dose: 0.8 (SD 0.3) Dose range: 0.5-2.0mg), 28 | Oral | Not applicable | 1 / 24 (4.2%) | 1 / 28 (3.6%) | 1.17(0.08 to 17.67) |
|  Second-generation antipsychotic vs. second-generation antipsychotic |   |   |   |   |   |   |   |   |
| Grover, 2011[30](#_ENREF_30) | Consecutive patients >-18 years old referred to psychiatry and diagnosed with delirium | Risperidone (Mean dose: 0.95mg Dose range: 0.5-2.0mg per day), 22 | Olanzapine (Mean dose: 3.05mg Dose range: 1.25-10 mg per day), 26 | Oral |   | 0 / 22 (0%) | 0 / 26 (0%) |   |
|  First-generation antipsychotic vs. other |   |   |   |   |   |   |   |   |
| Atalan, 2013[18](#_ENREF_18) | Post cardiac surgery patients with hyperactive type delirium | Haloperidol (Max dose: 20mg), 26 | Morphine sulfate (Max dose: 20mg), 27 | Intramuscular | Hospital mortality | 2 / 26 (7.7%) | 1 / 27 (3.7%) | 2.08 (0.20 to 21.55) |
| Breitbart, 1996[22](#_ENREF_22) | Medically hospitalized adult patients with AIDS and a DRS score of 13 or greater (delirium) | Chlorpromazine (Planned dose: Oral: 10-200mg, Intramuscular: 5-100mg Mean dose: 36 Dose range: 10-80mg), 13 | Lorazepam (Planned dose: Oral: 0.50-4.0mg, Intramuscular: 0.2-2.0mg Mean dose: 4.6 Dose range: 1.3 - 7.9mg), 6 | Oral or intramuscular |   | 2 / 13 (%) | 1 / 6 (16.7%) | 0.92 (0.10 to 8.31) |
| Breitbart, 1996[22](#_ENREF_22) | Medically hospitalized adult patients with AIDS and a DRS score of 13 or greater (delirium) | Haloperidol (Planned dose: oral: 0.25-5.0mg, Intramuscular: 0.125-3.0mg Mean dose: 1.4 Dose range: 0.4 - 3.6mg), 11 | Lorazepam (Planned dose: Oral: 0.50-4.0mg, Intramuscular: 0.2-2.0mg Mean dose: 4.6 Dose range: 1.3 - 7.9mg), 6 | Oral or intramuscular |   | 2 / 11 (%) | 1 / 6 (16.7%) | 1.09 (0.12 to 9.70) |

AIDS=acquired immunodeficiency syndrome; CI=confidence interval; DRS-R-98= Delirium Rating Scale Revised-98; DSM-IV=Diagnostic and Statistical Manual of Mental Disorders, 4th ed; ICU=intensive care unit; mg=milligram; N=sample size