## Table 3. Oral midazolam compared to oral chloral

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| **Oral midazolam compared to chloral hydrate for sedation before procedures** | | | | | | |
| **Patient or population:** Children requiring sedation before procedures that require motion control, including echocardiography, lumbar puncture, micturating cystourethrograms, and neuroimaging **Settings:** Paediatric ICU in USA, emergency departments in USA and Iran and Medical Imaging department in Turkey **Intervention:** Oral midazolam **Comparison:** Oral chloral hydrate | | | | | | |
| **Outcomes** | **Illustrative comparative risks\* (95% CI)** | | **Relative effect (95% CI)** | **No of Participants (studies)** | **Quality of the evidence (GRADE)** | **Comments** |
| **Assumed risk** | **Corresponding risk** |
| **Chloral hydrate** | **Oral midazolam** |
| **Level of sedation on sedation assessment scale**  [Derakhshanfar 2013](#STD-Derakhshanfar-2013) reported the number of patients reaching moderate sedation on Wheeler's sedation scale and [Salehi 2017](#STD-Salehi-2017) reported the number of patients reaching moderate sedation on the RASS scale. | **596 per 1000** | **179 per 1,000**  (66 to 489) | **RR 0.3**(0.11 to 0.82) | 228  (2) | **very low**1  ⊕⊝⊝⊝ |  |
| **Numeric rating of anxiety or number of participants** **rated as anxious**  (Numerical rating scale of 1 - 5 with lower scores indicating less anxiety) | 2.5 | MD was **0.77 lower2**  (2.2 lower to 0.68 higher) |  | 88 (2) | **low3**  ⊕⊕⊝⊝ | The assumed and corresponding risks were estimated from the SMD, which was -0.26 (95% CI = -0.75 to 0.23). |
| **Proportion of incomplete procedures or where there was difficulty performing the procedures** | **56 per 1000** | **226 per 1000** (108 to 474) | **RR 4.01**  (1.92 to 8.4) | 268 (4) | **moderate4**  ⊕⊕⊕⊝ |  |
| **Discomfort/Pain** (as defined/measured by the authors of the trial) |  |  |  |  |  | No studies reported on this outcome. |
| \*The basis for the **assumed risk** is the control group risk across studies or the average risk for pooled data and the control group risk for single studies. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI). **CI:** Confidence interval; **RR:** Risk ratio. | | | | | | |
| GRADE Working Group grades of evidence **High quality:** Further research is very unlikely to change our confidence in the estimate of effect. **Moderate quality:** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate. **Low quality:** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate. **Very low quality:** We are very uncertain about the estimate. | | | | | | |

###### Footnotes

1Downgraded three levels due to concerns about risk of bias (both studies had unclear and high risk of bias for multiple domains), inconsistency (although the effect estimates for both studies indicated midazolam was less likely to result in moderate sedation, the I2 value was high) and imprecision (wide confidence intervals indicating the effect could be either very large or small).

2Studies in this comparison used different instruments to measure anxiety. We used the SMD for meta-analysis. We selected the [D'Agostino 2000](#STD-D_x0027_Agostino-2000) trial as our representative study in order to calculate the assumed risk and corresponding risk for the summary of findings table. The standard deviation for the placebo group in this study was 2.97, measured on a scale ranging from 1 to 5.

3Downgraded three levels due to concerns about risk of bias (both studies had unclear and high risk of bias for multiple domains) and imprecision (optimal information size was not met ‐ only a small number of participants, wide confidence intervals crossing the line of no effect, and including the potential for both benefit and harm).

4Downgraded one level due to concerns about risk of bias (all studies had unclear and high risk of bias for multiple domains).