

Additional file 11: *Quality of evidence tables*

Quality of evidence domains for brief intervention (**BI**) vs. **no BI** in participants screened for at-risk substance use.

| Outcome | Study Limitations (risk of bias) | Inconsistency | Indirectness | Imprecision | Publication bias |
|---|--|---------------------------------------|------------------------|--|---|
| PRIMARY OUTCOMES | | | | | |
| Substance use | n/a | Not estimable | 0 (0) | n/a | Not measured. |
| Frequency of use [1] <ul style="list-style-type: none"> • Use of Cannabis / Other drugs¹ • Days abstinent Past 30-day use using a modified timeline follow-back interview. Follow-up: 1 and 3 months | Very serious limitations (high risk of bias) | No serious limitations (1 study only) | No serious limitations | Serious limitations One study assessed outcomes (lack of scientific replication). Less than 400 participants in analysis. | No serious limitations This study small and NS, not likely to be other studies |
| ASSIST score (composite outcome²) – All substances [2] Sum score. Higher score interpreted as higher substance involvement (range 0 to 27+ points). Follow-up: 3 months | Serious limitations (medium risk of bias) | No serious limitations (1 study) | No serious limitations | Serious limitations One study assessed this outcome (lack of scientific replication). Minimum important difference difficult to determine with the composite score. | No serious limitations This study small and NS, not likely to be other studies |
| SECONDARY OUTCOMES | | | | | |
| Other health measures <ul style="list-style-type: none"> • Use of drop-in services • Use of additional services • Use of other agency services | Very serious limitations (high risk of bias) | No serious limitations (1 study only) | No serious limitations | Serious limitations One study assessed outcomes (lack of scientific replication). Less than 400 participants in analysis. | No serious limitations This study small and NS, not likely to be other studies |

| Outcome | Study Limitations (risk of bias) | Inconsistency | Indirectness | Imprecision | Publication bias |
|----------------------------------|----------------------------------|---------------|--------------|-------------|------------------|
| Follow-up: 1 and 3 mo [1] | | | | | |

*Abbreviations: ASSIST = Alcohol, Smoking and Substance Involvement Screening Test; CI = confidence interval; d=days; MD = mean difference; mo=months; RR = risk ratio.

Footnotes:

¹Drugs other than tobacco, alcohol, cannabis were assessed.

²Composite outcome: substance use, frequency of use, use-related harms or negatives consequences, intention to reduce substance use, another person concerned with use, use of drug by injection.

Quality of evidence domains for **brief intervention vs. written information** in participants screened for at-risk substance use.

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | Imprecision | Publication bias |
|---|-----------|--|------------------------|------------------------|--|---|
| PRIMARY OUTCOMES | | | | | | |
| Substance use | | | | | | |
| Abstinence – All substances Cannabis [3]; Any prescription drugs (Sedatives/hypnotics/opioids) [4]. Assessment: Self-report (past 30 days) and NR (past 3 months). | 3 mo | Very serious limitations [3] - medium risk [4] - high risk | No serious limitations | No serious limitations | Very serious limitations Total events <300 and sample size <2000. CI for one study included both appreciable harm and benefit. Most likely also the case with the unit-of-analysis error study if appropriate corrections made. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Abstinence – Cocaine/heroin [5]; objective | 6 mo | Serious limitations | No serious limitations | No serious limitations | Serious limitations CI shows both appreciable benefit and harm. One study | No serious limitations Although a few number of studies located, mixed results in |

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | Imprecision | Publication bias |
|---|-------------|--|--|------------------------|--|---|
| assessment (past 30 days) | | | | | assessed outcome at 6 months. | statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Abstinence – All Substances Cannabis [3]; any prescription drug (Sedatives/hypnotics/opioids) [4] Mix of self-report (past 30 days), and NR (past 3 months). | 12 mo | Very serious limitations [3] – medium risk [4] - high risk | No serious limitations | No serious limitations | Serious limitations Total events <300 and sample size <2000. CI for one study included both appreciable harm and benefit. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| High on cannabis Measured within past 30 days using Timeline Followback Calendar [3]. | 3 and 12 mo | 3 mo: Serious limitations (medium) 12 mo: very serious limitations (high) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Reducing use >25% - Any prescription drug [4] | 3 and 12 mo | Very serious limitations (high) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. One study assessed outcome (lack of scientific replication). 12 mo: CI includes no effect and appreciable harm. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | Imprecision | Publication bias |
|--|-------------|---------------------------------|---------------------------------------|------------------------|--|---|
| Frequency of use | | | | | | |
| Change in cannabis consumption. Change from baseline, measured within past 30 days using Timeline Followback Calendar [3]. | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Population size <400. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Quantity of use | | | | | | |
| Reduction of defined daily dosage – Any prescription drug Patient's dose of a given prescription drug per day (in mg) divided by the product-specific WHO measure [4]. | 3 and 12 mo | Very serious limitations (high) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total population size <400. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Change in drug level - Cocaine - Opioids Biochemical hair analysis [5] | 6 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total population size <400. One study assessed outcome (lack of scientific replication). Information poorly reported – p value only provided. We do not know width of CI and therefore are uncertain how precise the data are. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Use-related harms or negative consequences of use | | | | | | |

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | Imprecision | Publication bias |
|--|-------------|------------------------------|---------------------------------------|------------------------|---|---|
| Carried a weapon. Past 30 days (gun, knife, club) [3]. (330) | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. One study assessed outcome (lack of scientific replication). 3 mo: CI includes no effect and appreciable benefit. 12 mo: CI includes no effect and both appreciable benefit and harm. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Drove a car after using cannabis. Past 30 days [3]. | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Very serious limitations Total events <300 and sample size <2000. CI includes no effect and both appreciable benefit and harm. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Rode in a car with a person drunk/high. After cannabis use, past 30 days [3]. | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Very serious limitations Total events <300 and sample size <2000. CI includes no effect and both appreciable benefit and harm. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Physical fight. Past 30 days [3]. | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Very serious limitations Total events <300 and sample size <2000. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) |

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | Imprecision | Publication bias |
|--|-------------|------------------------------|---------------------------------------|------------------------|---|---|
| | | | | | 3 mo: CI includes no effect and both appreciable benefit and harm. | exists among them. We feel there is a low risk of publication bias. |
| Positive behaviour change | | | | | | |
| Tried to cut back on cannabis use. [3] | 3 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. CI includes no effect and appreciable benefit. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| | 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. CI includes no effect and appreciable benefit. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Tried to stop using cannabis. [3] | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. One study assessed outcome (lack of scientific replication). 12 mo: CI includes no effect and appreciable benefit. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| “Tried to be careful about situations you got | 3 and 12 mo | Serious limitations (Medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. One study | No serious limitations Although a few number of studies located, mixed results in |

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | Imprecision | Publication bias |
|--|-----------------------------------|------------------------------|---------------------------------------|------------------------|---|---|
| into when using cannabis” [3] | | | | | assessed outcome (lack of scientific replication). 3 mo: CI includes no effect and appreciable benefit. | statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Other health measures | | | | | | |
| Felt unsafe in the past 30 days. [3] | 3 and 12 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Total events <300 and sample size <2000. One study assessed outcome (lack of scientific replication). 3 mo: CI includes no effect and appreciable benefit. | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| Change in ASI composite score from baseline – Cocaine and/or heroin Drug and medical subscales [5] | 3 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Authors only state not significant, no data are provided to calculate an effect estimate and confidence interval. Accordingly, we do not know how precise the results are. One study assessed outcome (lack of scientific replication). | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |
| | Drug - 6 mo Medical – 6 mo | Serious limitations (medium) | No serious limitations (1 study only) | No serious limitations | Serious limitations Information poorly reported – p value only provided. We do not know width of CI and therefore are uncertain how precise the data are. One study assessed outcome | No serious limitations Although a few number of studies located, mixed results in statistical significance for an important outcome (abstinence) exists among them. We feel there is a low risk of publication bias. |

| Outcome | Follow-up | Risk of bias | Inconsistency | Indirectness | imprecision (lack of scientific replication). | Publication bias |
|---------|-----------|--------------|---------------|--------------|--|------------------|
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References

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