ISDUP and EUPC on brief interventions to prevent substance use

A foundation document

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3 November 2025

Introduction

This document reviews the scientific evidence for efficacy of brief interventions in health services as described in UNODC's International Standards of Drug Use Prevention (ISDUP) and in EMCDDA's/EUDA's European Prevention Curriculum (EUPC). As these reports are important guidelines for evidence-based prevention work to reduce alcohol and drug related harms, it is essential that the referenced evidence base is accurate and reliable. Preferably, the referenced literature should also be updated and cover the extant literature adequately. This document serves as a reference document (or foundation document) for a shorter and less detailed version in Norwegian. This document is produced as part of project, involving collaboration between the Norwegian Directorate of Health and the Norwegian Public Health Institute (NIPH). In addition to examining the evidence base for effective alcohol and drug prevention, which is the focus of the present document, the collaborative project will include also an assessment of suitability for implementation of effective interventions in a Norwegian context. Brief interventions in health services are, next to alcohol policies, a high priority to consider here because brief interventions are rated as having 'very good' evidence of efficacy in ISDUP.

This document includes the following parts: - Assessment of relevance of referenced studies for brief interventions, - Review of referenced studies on brief interventions in health care sector to prevent substance use in target population, - Consistency in ISDUP/EUPC statements on efficacy and the referenced literature, - Summary and discussion, and – References.

Assessment of relevance of referenced studies for brief interventions

What is meant by 'brief interventions'?

In ISDUP 2nd ed., brief intervention is described as follows: "Brief interventions consist of one-to-one counselling sessions that can include follow-up sessions or additional information to take home. They can be delivered by a variety of trained health and social workers to people who might be at risk because of their substance use but who would not necessarily seek treatment. The sessions first identify whether there is a substance use problem and provide immediate appropriate basic counselling and/or referral for additional treatment. The sessions are structured and typically last from 5 to 15 minutes.

Brief interventions are typically delivered in the primary health-care system or in emergency rooms, but they have also been found to be effective when delivered as part of school-based and workplace programmes, and when delivered online or via computers.

Brief intervention sessions typically employ motivational interviewing techniques, which is a psychosocial intervention in which a person's substance use is discussed and the patient is supported in making decisions and setting goals with respect to his or her substance use. In this case, the brief intervention is normally delivered over the course of up to four sessions that can be up to one hour long, but usually consist of sessions of a shorter duration."

In ISDUP 1st ed., brief intervention is described with an almost identical text compared to the 2nd ed.

In Table 1 (ISDUP 1st ed., p. 10), brief intervention is described as an indicated intervention in the health sector.

In EUPC, health sector interventions are not included.

Thus, the description of brief intervention in ISDUP is used to identify interventions subsuming to the category brief intervention. While this description includes also interventions delivered as part of school-based or workplace programmes and brief interventions delivered on electronic platforms, the following assessment of brief interventions is delineated to those delivered in the health sector. There are several reasons for this. First, this delineation ensures that "immediate appropriate basic counselling and or/referral for additional treatment" can be done. Second, the interpretation of findings from systematic reviews and meta-analyses is less confounded by heterogenous interventions in terms of context and content. Third, it may be assumed that assessment and advice from health personnel, as compared to that from others, have a different, and probably stronger, impact on people's willingness to change their substance use. Finally, it is of interest to identify interventions in the health sector specifically to assess whether these are useful and effective in this sector. Moreover, only interventions targeting people in the general population at risk of substance abuse were considered relevant in this context. Thus, studies evaluating intervention effects in people with substance abuse/dependence or people with other health problems, were not included in our assessment. Finally, in our context, smoking behaviour or other tobacco use was not a relevant outcome in evaluation studies.

<u>To sum up: Inclusion criteria for relevance were as follows:</u>

The intervention is brief in terms of duration per session (up to 30 minutes) and number of intervention sessions (up to 3 sessions)

The intervention occurs in the health sector and is typically delivered by health personnel

The target population constitutes those in the general population at risk of substance abuse, but does not include people with substance abuse/dependence or people with other specific and severe health problems.

The outcome of the intervention is delineated to substance use (i.e. alcohol, illicit drugs, or psychotropic prescription drugs) and does not include tobacco use or other nicotine use.

References to brief interventions

In the Appendix providing the reference list for various interventions, there are altogether 35 references to systematic reviews and 17 references to RCTs for brief interventions. These references were received in the course of the process of the development of the International Standards, regardless of whether they were included in the assessment and/or what their rating was.

In ISDUP 1st ed., 24 references[1] to systematic reviews of brief interventions are given. Among these, 19 references correspond to the reference list in the Appendix, whereas 2 references differ with regard to publication year, and 3 references in ISDUP 1st edition are not in the reference list in the section on brief interventions. Among the 24 referenced reviews in ISDUP 1st ed., 23 are found in the Annex providing summary of study findings and assessment of study quality. Ten of these 23 studies were categorised as 'good quality' reviews, and the remaining 13 as 'acceptable quality' reviews[2].

In ISDUP 2nd ed., altogether 48 references to review studies were given for brief interventions and 10 of the 24 references to systematic reviews in the 1st edition were also among the 48 references in the 2nd edition. Thus, in the two editions, ISDUP includes a total of 62 systematic reviews on brief interventions. Among the 10 systematic review studies referenced in both 1st edition and 2nd edition, 4 reviews were assessed as 'good quality' studies and 6 were assessed as 'acceptable quality' studies in the Annex. Considering the magnitude of the literature and the importance of more recent studies, the further assessment of referenced studies pertaining to brief interventions includes only those referenced in the 2nd edition.

Among the 48 referenced review studies in ISDUP 2nd ed., almost all (n=42) were journal article publications, all were review studies and the vast majority (n= 39) were systematic review and/or meta-analyses. Among the 48 referenced studies, 11 studies were included in the assessment of brief interventions in the health care sector for preventing substance use (see Table 1). Moreover, in EUDA's Best Practice Portal (Evidence base), a total of 9 studies were identified as candidates for inclusion in the assessment. With the exception of one report which summarised previously

[1] Ballesteros, 2004 (g); Beich, 2003 (a); Bertholet, 2005 (g) ; Carney, 2012 (a); Christakis, 2003 (a); Dunn, 2001 (a); Emmen, 2004 (g); Fager, 2004 (a); Gates, 2006 (g); Humeniuk, 2012; Jensen, 2011 (a); Jones, 2006 (g); Kahan, 1995 (a); Kaner, 2007 (g); Khadjesari, 2010 (g); McQueen, 2011 (g); Nilsen, 2008 (a); Riper, 2009 (g); Smedslund, 2011(g); Tait, 2003 (a); Vasilaki, 2006 (a); Wachtel, 2010 (a); White, 2010 (a); Wilk, 1997 (a).

[2] Studies assessed as 'good quality' are marked with 'g' in parenthesis, those assessed as 'acceptable quality' are marked with 'a' in parenthesis in the above list.

published journal articles of systematic reviews, the remaining 8 studies were journal articles and systematic reviews, and 6 of the 9 studies were included in the assessment (Table 1).

References in ISDUP 2nd edition, assessment of relevance:

Ashton et al. (2015):

Ashton, L. M., Morgan, P. J., Hutchesson, M. J., Rollo, M. E., Young, M. D., & Collins, C. E. (2015). A systematic review of SNAPO (Smoking, Nutrition, Alcohol, Physical activity and Obesity) randomized controlled trials in young adult men. *Preventive Medicine*, *81*, 221-231. A systematic review of SNAPO (Smoking, Nutrition, Alcohol, Physical activity and Obesity) randomized controlled trials in young adult men - ScienceDirect

This study is an umbrella review of brief interventions in various health areas. The review included six primary studies targeting alcohol consumption, none of these pertained to brief interventions in the health care sector. This review was not relevant.

Baker et al. (2012):

Two references were found that could possibly be the one referred to in ISDUP:

Baker, A. L., Thornton, L. K., Hiles, S., Hides, L., & Lubman, D. I. (2012). Psychological interventions for alcohol misuse among people with co-occurring depression or anxiety disorders: a systematic review. *Journal of Affective Disorders*, *139*(3), 217-229.

Psychological interventions for alcohol misuse among people with co-occurring depression or anxiety disorders: A systematic review - ScienceDirect

This systematic review included primary studies examining effects of manual guided psychological interventions targeting alcohol misuse among people with co-occurring depressive or anxiety disorders. Thus, the target population was people with specific severe health problems and this review was not relevant.

Baker, A. L., Hiles, S. A., Thornton, L. K., Hides, L., & Lubman, D. I. (2012). A systematic review of psychological interventions for excessive alcohol consumption among people with psychotic disorders. *Acta Psychiatrica Scandinavica*, *126*(4), 243-255.

A systematic review of psychological interventions for excessive alcohol consumption among people with psychotic disorders - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf

This systematic review included primary studies examining effects of interventions addressing excessive drinking among people with psychotic disorders. Thus, the target population was people with specific severe health problems and this review was not relevant.

Bertholet (2005),

Bertholet, N., Daeppen, J. B., Wietlisbach, V., Fleming, M., & Burnand, B. (2005). Reduction of alcohol consumption by brief alcohol intervention in primary care: systematic review and meta-analysis. *Archives of Internal Medicine*, *165*(9), 986-995.

Reduction of Alcohol Consumption by Brief Alcohol Intervention in Primary Care: Systematic Review and Meta-analysis | Substance Use and Addiction Medicine | JAMA Internal Medicine | JAMA Network

This study was relevant and further description is presented in the assessment of relevant studies.

Carey et al. (2012),

Not listed in the Annex for ISDUP 1st ed. Most likely it is the following publication:

Carey, K. B., Scott-Sheldon, L. A., Elliott, J. C., Garey, L., & Carey, M. P. (2012). Face-to-face versus computer-delivered alcohol interventions for college drinkers: A meta-analytic review, 1998 to 2010. *Clinical Psychology Review*, *32*(8), 690-703. Face-to-face versus computer-delivered alcohol interventions for college drinkers: a meta-analytic review, 1998 to 2010 - Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews - NCBI Bookshelf

Face-to-Face Versus Computer-Delivered Alcohol Interventions for College Drinkers: A Meta-Analytic Review, 1998 to 2010 - PMC

In this review, the efficacy of two different brief interventions on alcohol consumption among college students were compared in a meta-analysis. Altogether 48 RCTs were included: 22 RCTs evaluating face-to-face- intervention and 25 RCTs and 1 quasi-experimental study evaluating computer-delivered interventions. The studies were conducted in large public universities in the USA. From the review (and having also looked at several of the primary studies), it seems that the intervention context was at the universities and not within a health service or having the intervention delivered by health personnel. Hence, the intervention context is outside the health sector and this review was not relevant.

(an alternative publication could perhaps be the following: Carey, K. B. (2012). Brief motivational interventions. In: *CJ, Correia, J., Murphy, N. Barnett,(Eds.), College student alcohol abuse: A guide to assessment, interventions, and prevention*, 218-245. However, this book chapter is authored solely by Kate Carey and presents an overview of brief motivational interventions (BMI) providing a pragmatic or unsystematic review of studies examining efficacy of BMI on alcohol consumption among young people/college students (many of the references primary studies are authored by Kate Carey). This review is not further considered).

Carey et al. (2016),

Carey, K. B., Scott-Sheldon, L. A., Garey, L., Elliott, J. C., & Carey, M. P. (2016). Alcohol interventions for mandated college students: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, *84*(7), 619.

2016-19863-001.pdf

This review included 31 primary studies that examined effects of various individual or group level interventions mandated for college students who had violated campus alcohol policies. Hence, the intervention context is outside the health sector and this review was not relevant.

Carney (2012),

Carney, T., & Myers, B. (2012). Effectiveness of early interventions for substance-using adolescents: findings from a systematic review and meta-analysis. *Substance Abuse Treatment, prevention, and policy*, *7*, 1-15.

1747-597X-7-25.pdf

This review included 9 primary (controlled follow-up) studies examining effects of early interventions targeting young people who did not meet criteria for substance abuse/dependence. In most of these studies the interventions were conducted in schools/education settings, juvenile facilities or other non-health care settings. Thus, interventions were mainly conducted outside the health sector and therefore this review was not relevant.

Carney et al. (2014),

Carney, T. (2014). Evidence-based screening, brief intervention and referral to treatment for substance-using adolescents with delinquent-type behaviours.

Evidence-Based Screening, Brief Intervention and Referral to Treatment for Substance-Using Adolescents with Delinquent -Type Behaviours

This PhD thesis includes one chapter (Ch 5) that pertains to a systematic review of effectiveness of brief interventions (Bis). Specifically, the author aimed at conducting "a systematic review to try and identify an effective BI that could form part of a SBIRT model for intervening with at-risk adolescents from Cape Town. In addition, it aimed to address the effectiveness of BI for substance-using adolescents at risk for delinquent-type behaviours, as there have only been a few studies of brief interventions on substances other than alcohol through conducting a systematic review of BIs. More specifically, the objective of this review was to summarize the evidence, and assess the effectiveness of brief interventions for substance-using adolescents at risk for delinquent-type behaviour, given that extant reviews of BIs for adolescents have not addressed their adequacy for other behaviours." Altogether 7 primary studies were included in the review and meta-analysis and the chapter seems to be a version of the Carney & Myers publication from 2012, only with 2 fewer included primary studies. The context of the intervention varied across studies (e.g. youth centre, community health centre, homeless drop-in centre, emergency department, correctional facility, and high school). Most interventions employed motivational interviewing, and in most studies each intervention session lasted for over 30 minutes. As the intervention context was mainly outside the health sector, this review was not relevant.

Christakis (2003),

Christakis, D. A., Garrison, M. M., Ebel, B. E., Wiehe, S. E., & Rivara, F. P. (2003). Pediatric smoking prevention interventions delivered by care providers: a systematic review. *American Journal of Preventive Medicine*, *25*(4), 358-362.

s0749-3797_2803_2900214-920211003-16122-1ls0a6h-libre.pdf

This systematic review included 4 primary studies of randomized controlled trials of smoking prevention interventions for youth delivered via medical or dental providers' offices. Hence, the intervention outcome was smoking behaviour and therefore this review was not considered relevant.

Davis et al. (2017)

Davis, J. P., Smith, D. C., & Briley, D. A. (2017). Substance use prevention and treatment outcomes for emerging adults in non-college settings: A meta-analysis. *Psychology of Addictive Behaviors*, *31*(3), 242.

2017-12468-001.pdf

This systematic review included RCTs examining effects of prevention or treatment for young people (emerging adults) in a non-college setting. Altogether 50 primary studies were included, and these covered various types of interventions (prevention or treatment), various settings (not-for profit, or hospital/ER), various intervention duration and various outcomes (alcohol use, drug use or alcohol/drug problems). Although meta-analyses were conducted for various interventions and moderators, it is not possible to extract findings from primary studies of brief interventions conducted in health sector contexts, targeting at-risk populations. Therefore, this review was not relevant.

Dedert et al. (2014),

Dedert, E., Williams Jr, J. W., Stein, R., McNeil, J. M., McDuffie, J., Ross, I., ... & Nagi, A. (2014). e-Interventions for Alcohol Misuse. https://www.ncbi.nlm.nih.gov/books/NBK293703/

This book includes a systematic review of 26 primary studies (all RCTs) evaluating effects of e-interventions (CD-ROM based, web-based, interactive voice response, or mobile applications) on alcohol use (or AUD) in adult populations. Primary studies of outpatients in any setting (general medical, emergency room, and community) or participants not engaged in clinical care who are enrolled through self-assessments. Primary studies included also those where enrollment was inpatient but the majority of the intervention was delivered outpatient. Study outcomes were diverse, including alcohol consumption, alcohol-related health or social problems, functional status measures, medical utilization or adverse effects from treatment. When meta-analysis was feasible, summary estimates of effect were computed, stratified by condition (alcohol misuse versus at risk of AUD or with AUD), for both end-of-treatment and longest follow-up point ≥6 months. Thus, primary studies were heterogeneous regarding context/setting, target group and outcome measures, and the intervention deviates from the typical brief intervention delivered by health personnel to patients in health services. This review was not relevant.

Dedert et al. (2015),

Dedert, E. A., McDuffie, J. R., Stein, R., McNiel, J. M., Kosinski, A. S., Freiermuth, C. E., ... & Williams Jr, J. W. (2015). Electronic interventions for alcohol misuse and alcohol use disorders: a systematic review. *Annals of Internal Medicine*, *163*(3), 205-214.

Electronic Interventions for Alcohol Misuse and Alcohol Use Disorders A Systematic Review

This review included 28 unique RCTs of e-interventions (i.e. computer-based therapy adhering to evidence-based treatment principles and providing individually delivered treatment for alcohol misuse delivered by CD-ROM, Web-based, IVR, mobile phones, or in-home electronic devices). Primary study setting comprised outpatients in any setting (general medical, emergency department, and community) or participants not engaged in clinical care who are enrolled through self-assessments and studies where enrollment was inpatient but the majority of the intervention was delivered outpatient, were also included. Study outcomes were diverse: alcohol consumption, alcohol-related health problems, alcohol-related legal or social problems, HRQOL, functional status measures, medical utilization, or adverse effects from treatment. Meta-analyses were conducted when at least 3 trials reported a given outcome. Thus, primary studies were heterogeneous regarding context/setting, target group and outcome measures, and the intervention deviates from the typical brief intervention delivered by health personnel to patients in health services. This review was not relevant.

Diestelkamp et al. (2016),

Diestelkamp, S., Drechsel, M., Baldus, C., Wartberg, L., Arnaud, N., & Thomasius, R. (2016). Brief in person interventions for adolescents and young adults following alcohol-related events in emergency care: a systematic review and European evidence synthesis. *European addiction research*, *22*(1), 17-35. (bestilt Bibl 8. Aug).

This review included 7 RCTs and 8 other studies evaluating effects of brief interventions in emergency departments following alcohol-related event among young people (12-25 yrs). This review was relevant and further description is presented in the assessment of relevant studies.

Donoghue et al. (2014),

Donoghue, K., Patton, R., Phillips, T., Deluca, P., & Drummond, C. (2014). The effectiveness of electronic screening and brief intervention for reducing levels of alcohol consumption: a systematic review and meta-analysis. *Journal of Medical Internet Research*, *16*(6), e142.

Journal of Medical Internet Research - The Effectiveness of Electronic Screening and Brief Intervention for Reducing Levels of Alcohol Consumption: A Systematic Review and Meta-Analysis

This review included 17 primary (controlled) studies evaluating effect of e-intervention for reducing alcohol consumption. The vast majority of studies recruited participants in non-health care settings, and hence the health sector was in most instances not involved in these studies. This review was not relevant.

Dotson et al. (2015),

Dotson, K. B., Dunn, M. E., & Bowers, C. A. (2015). Stand-alone personalized normative feedback for college student drinkers: A meta-analytic review, 2004 to 2014. *PloS one*, *10*(10), e0139518.

Stand-Alone Personalized Normative Feedback for College Student Drinkers: A Meta-Analytic Review, 2004 to 2014

This review included 8 controlled studies (13 interventions) comparing computer-delivered stand-alone PNF (personalized normative feedback) intervention with an assessment only attention matched or active treatment control among college students. Outcomes were alcohol use and related harms. Study introduction states that "Computer-delivered stand-alone PNF has been evaluated as a web-based intervention in non-structured settings. Students typically receive an emailed link to access the intervention online and then complete the program when convenient." Thus, the intervention is conducted outside the health sector and this review was not relevant.

Dunn (2001):

Dunn, C., Deroo, L., & Rivara, F. P. (2001). The use of brief interventions adapted from motivational interviewing across behavioral domains: a systematic review. *Addiction*, *96*(12), 1725-1742.

This umbrella review included 29 evaluation studies of motivational interviewing (MI) interventions across four behavioural domains, including substance abuse (n=15). In a majority n=13) of the included studies on substance use, the setting was in the health sector (e.g. hospital, outpatient medical clinic, emergency room). Included subjects were clients with substance dependence or substance abuse. Study inclusion allowed for several types of comparison groups in the study design: MI vs no-treatment; MI vs a comparison treatment group, and MI enhancing TAU vs TAU (e.g. intensive, specialized substance abuse treatment). Moreover, duration of intervention was typically 60 minutes or longer (up to 240 minutes). Thus, target population was not those at-risk of substance use problems and the intervention content and duration differed from the typical 'brief' intervention. This review was not relevant.

Elzerbi et al. (2015),

Elzerbi, C., Donoghue, K., & Drummond, C. (2015). A comparison of the efficacy of brief interventions to reduce hazardous and harmful alcohol consumption between European and non-European countries: a systematic review and meta-analysis of randomized controlled trials. *Addiction*, *110*(7), 1082-1091

This review included 28 RCTs from primary health care (n=20) and emergency department (n=8) settings, evaluating efficacy of brief intervention on hazardous or harmful alcohol consumption. This review was relevant and further description is presented in the assessment of relevant studies.

Elzerbi et al. (2017),

Elzerbi, C., Donoghue, K., Boniface, S., & Drummond, C. (2017). Variance in the efficacy of brief interventions to reduce hazardous and harmful alcohol consumption between injury and noninjury patients in emergency departments: a systematic review and meta-analysis of randomized controlled trials. *Annals of Emergency Medicine*, *70*(5), 714-723.

This systematic review and meta-analysis included 23 primary RCT studies examining efficacy of brief intervention in emergency department setting on alcohol use. This review was relevant and further description is presented in the assessment of relevant studies.

Foxcroft et al. (2015)

It is not entirely clear which study by Foxcroft et al., 2015 that is referenced. Among David Foxcroft's publications from 2015 (with Foxcroft as first author and one or more co-authors), there are two that seem likely:

1) Foxcroft, D. R., Moreira, M. T., Santimano, N. M. A., & Smith, L. A. (2015). Social norms information for alcohol misuse in university and college students. *Cochrane database of systematic reviews*, (12).

Social norms information for alcohol misuse in university and college students - Foxcroft, DR - 2015 | Cochrane Library

This systematic review included 70 primary RCT or CRCT studies (63 in meta-analysis) evaluating efficacy of normative feedback on alcohol use among university/college students. Intervention was delivered by mail, web/computer, individual or group face-to-face or marketing campaign. The intervention context was outside the health sector and this review was not relevant.

2) Foxcroft DR, Coombes L, Wood S, Allen D, Almeida Santimano NM. Motivational interviewing for the prevention of alcohol misuse in young adults. Cochrane Database Syst Rev. 2015 Sep 1;(9):CD007025. doi: 10.1002/14651858.CD007025.pub3.

This study is withdrawn (WITHDRAWN: Motivational interviewing for alcohol misuse in young adults - PubMed). The 2015 publication was an update of a Cochrane publication from 2014: Foxcroft DR, Coombes L, Wood S, Allen D, Almeida Santimano NM. Cochrane Database Syst Rev. 2014 Aug 21;(8):CD007025. doi: 10.1002/14651858.CD007025.pub2.

A critical review of the Foxcroft et al. 2014 publication was published by Mun et al., 2015: https://pubmed.ncbi.nlm.nih.gov/26237287/

Thus, the 2015 publication is not further considered.

Foxcroft et al. (2016),

Foxcroft, D. R., Coombes, L., Wood, S., Allen, D., Santimano, N. M. A., & Moreira, M. T. (2016). Motivational interviewing for the prevention of alcohol misuse in young adults. *Cochrane Database of Systematic Reviews*, (7).

Motivational interviewing for the prevention of alcohol misuse in young adults - PMC

This review included 84 RCTs of motivational interviewing (MI) interventions for prevention of alcohol misuse/related problems among young people (up to 25). The majority (59 of 84) studies took place in college settings. The remaining trials took place in healthcare locations, youth centres, local companies, job training centre, army recruitment setting, drug agencies or youth prisons. MI interventions conducted in health care settings were not assessed separately. Thus, this review does not provide evaluation of brief intervention in the health sector and is therefore not relevant.

Gulliver et al. (2015),

Gulliver, A., Farrer, L., Chan, J. K., Tait, R. J., Bennett, K., Calear, A. L., & Griffiths, K. M. (2015). Technology-based interventions for tobacco and other drug use in university and college students: a systematic review and meta-analysis. *Addiction Science & Clinical Practice*, *10*, 1-10.

Technology-based interventions for tobacco and other drug use in university and college students: a systematic review and meta-analysis

This review included 12 primary studies (RCTs) conducted in a university/college setting, most of which (n=9) evaluated technology-based interventions targeting tobacco use. This review is not relevant.

Hennessy and Tanner-Smith (2015),

Hennessy, E. A., & Tanner-Smith, E. E. (2015). Effectiveness of brief school-based interventions for adolescents: A meta-analysis of alcohol use prevention programs. *Prevention Science*, *16*, 463-474.

nihms733094.pdf

This systematic review and meta-analysis included 17 experimental/quasi-experimental primary studies and summarised the effectiveness of school-based brief alcohol interventions. Thus, the intervention was conducted outside the health sector and this review was not relevant.

Hennessy et al. (2015),

Hennessy, E. A., Tanner-Smith, E. E., & Steinka-Fry, K. T. (2015). Do brief alcohol interventions reduce tobacco use among adolescents and young adults? A systematic review and meta-analysis. *Journal of Behavioral Medicine*, *38*, 899-911.

nihms733090.pdf

This systematic review and meta-analysis included 18 RCTs or quasi-experimental primary studies, and only one of these was conducted in a health care setting. Thus, the intervention was mainly conducted outside the health sector and this review was therefore not relevant.

Jensen (2011),

Jensen, C. D., Cushing, C. C., Aylward, B. S., Craig, J. T., Sorell, D. M., & Steele, R. G. (2011). Effectiveness of motivational interviewing interventions for adolescent substance use behavior change: a meta-analytic review. *Journal of Consulting and Clinical Psychology*, *79*(4), 433.

2011-13407-001.pdf

This systematic review and meta-analysis included 21 primary studies evaluating effectiveness of motivational interviewing (MI) interventions (most often brief interventions) to reduce substance use among adolescents. The interventionists included a variety of professionals, suggesting that the interventions took place in various settings and effects sizes were not presented for health care settings. Thus, this review was not relevant.

Jiang and Gao (2017),

It is not entirely clear which publication this is. From searches in Google Scholar and PubMed it seems most likely that it is the publication by Jiang, Wu and Gao, 2017.

Jiang, S., Wu, L., & Gao, X. (2017). Beyond face-to-face individual counseling: A systematic review on alternative modes of motivational interviewing in substance abuse treatment and prevention. *Addictive Behaviors*, *73*, 216-235.

Beyond face-to-face individual counseling- A systematic review on alternative modes of motivational interviewing in substance abuse treatment and prevention

This systematic review qualitatively synthesized evidence of effectiveness of motivational interviewing (MI) delivered in modes other than face-to-face individual counselling (e.g. telephone, internet, sms). The review included 22 RCT studies and 9 of these studies targeted alcohol use. Among these, 4 studies targeted people with alcohol abuse/dependence/drinking problems, 3 studies targeted college students or teens violating campus programs or had high risk use, and 1 study targeted young people admitted to emergency department who screened positive for past hazardous alcohol use. An additional 3 studies targeted drug use, 1 of which in a sample of psychotic patients with cannabis dependence. While not entirely clear from the publication, the description of counsellor background (those who performed/delivered the intervention) across primary studies, it seems that most or all interventions were conducted outside the health sector. Moreover, none of the studies employed alternative media (e.g. telephone, internet) as supplement to face-to-face MI. Therefore, this review was not relevant for assessment of brief interventions in the health sector.

Kaner (2007),

Kaner EF, Dickinson HO, Beyer FR, Campbell F, Schlesinger C, Heather N, Saunders JB, Burnand B, Pienaar ED. (2007). Effectiveness of brief alcohol interventions in primary care populations (review) Cochrane Database Sys Rev. 2007. *Art. No. CD004148*. [3]

Effectiveness of brief alcohol interventions in primary care populations - Kaner, EF - 2007 | Cochrane Library

This systematic review and meta-analysis review included 29 RCTs involving patients in primary care (24 trials) or in emergency setting (5 trials) who were not seeking alcohol treatment and who received brief intervention. This review was relevant and further description is presented in the assessment of relevant studies.

An update of the 2007 Cochrane publication was published in 2018: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004148.pub4/abstract .

[3] NB! A relevant study is found for the year 2009: Kaner, E. F., Dickinson, H. O., Beyer, F., Pienaar, E., Schlesinger, C., Campbell, F., ... & Heather, N. (2009). The effectiveness of brief alcohol interventions in primary care settings: a systematic review. *Drug and Alcohol Review*, *28*(3), 301-323.

Kazemi et al. (2013),

Kazemi, D. M., Berry-Cabán, C. S., Becker, C., & Hiebert, J. (2013). Review of interventions designed to address drinking among soldiers. *Military Psychology*, *25*(4), 365-380.

This review included 10 primary studies which evaluated alcohol intervention programs targeting military personnel (Only 1 of the studies used an RCT design). The review evaluated alcohol brief interventions for active duty soldiers in the USA [4]and is therefore not relevant with regard to brief interventions in the health sector.

Another study by Kazemi et al. from 2013 is a primary study and hence not relevant:

Kazemi, D. M., Levine, M. J., Dmochowski, J., Shou, Q., & Angbing, I. (2013). Brief motivational intervention for high-risk drinking and illicit drug use in mandated and voluntary freshmen. *Journal of Substance Use*, *18*(5), 392-404.

Landy et al. (2016),

Landy, M. S., Davey, C. J., Quintero, D., Pecora, A., & McShane, K. E. (2016). A systematic review on the effectiveness of brief interventions for alcohol misuse among adults in emergency departments. *Journal of Substance Abuse Treatment*, *61*, 1-12.

A Systematic Review on the Effectiveness of Brief Interventions for Alcohol Misuse among Adults in Emergency Departments

This systematic review included 34 primary studies evaluating effectiveness of BI for alcohol misuse delivered to adults in emergency departments. This review was relevant and further description is presented in the assessment of relevant studies.

Leeman et al. (2015),

Leeman, R. F., Perez, E., Nogueira, C., & DeMartini, K. S. (2015). Very-brief, web-based interventions for reducing alcohol use and related problems among college students: a review. *Frontiers in Psychiatry*, *6*, 129.

fpsyt-06-00129.pdf

This systematic review included 15 RCTs evaluating efficacy of very-brief web-based interventions among college students for reducing alcohol consumption. The intervention was conducted outside the health sector and therefore this review was not relevant.

McGinnes et al. (2016),

McGinnes, R. A., Hutton, J. E., Weiland, T. J., Fatovich, D. M., & Egerton-Warburton, D. (2016). Effectiveness of ultra-brief interventions in the emergency department to reduce alcohol consumption: a systematic review. *Emergency Medicine Australasia*, *28*(6), 629-640.

[4] Described in Wigham et al., 2017: 620670.pdf

This review included 13 primary studies (RCTs or quasi-RT) evaluating effectiveness of ultra-brief intervention (or technology-involved prevention) for patients presenting with alcohol-related harm in the emergency department. This review was relevant and further description is presented in the assessment of relevant studies.

Merz et al. (2015),

Merz, V., Baptista, J., & Haller, D. M. (2015). Brief interventions to prevent recurrence and alcohol-related problems in young adults admitted to the emergency ward following an alcohol-related event: a systematic review. *J Epidemiol Community Health*, *69*(9), 912-917.

This review included 4 RCTs evaluating effectiveness of brief intervention in the emergency department for young people (18-24 yrs) following an alcohol-related event. This review was relevant and further description is presented in the assessment of relevant studies.

Moreira (2009),

Moreira, M. T., Smith, L. A., & Foxcroft, D. (2009). Social norms interventions to reduce alcohol misuse in university or college students. *Cochrane database of systematic reviews*, (3).

Social norms information for alcohol misuse in university and college students - Foxcroft, DR - 2015 | Cochrane Library

This systematic review and meta-analysis included 22 primary studies evaluating effectiveness of social normative intervention in university/college students. The intervention context was outside the health sector and this review was not relevant.

An update of this review was published in December 2015 (i.e. the Foxcroft et al., 2015 publication noted above: Social norms information for alcohol misuse in university and college students - Foxcroft, DR - 2015 | Cochrane Library).

Newton et al. (2013),

Newton, A. S., Dong, K., Mabood, N., Ata, N., Ali, S., Gokiert, R., ... & Wild, T. C. (2013). Brief emergency department interventions for youth who use alcohol and other drugs: a systematic review. *Pediatric Emergency Care*, *29*(5), 673-684.

PEC22012 673..684

This review included 9 primary studies (RCTs) evaluating effects of brief interventions in emergency departments targeting youths (up to 21 years) who were screened positive for alcohol or reported recent alcohol or drug use. This review was relevant and further description is presented in the assessment of relevant studies.

Oosterveen et al. (2017),

Oosterveen, E., Tzelepis, F., Ashton, L., & Hutchesson, M. J. (2017). A systematic review of eHealth behavioral interventions targeting smoking, nutrition, alcohol, physical activity and/or obesity for young adults. *Preventive Medicine*, *99*, 197-206.

A systematic review of eHealth behavioral interventions targeting smoking, nutrition, alcohol, physical activity and/or obesity for young adults - ScienceDirect

This systematic umbrella review included 45 RCTs evaluating effectiveness of eHealth interventions targeting various health behaviours (SNAPO) in young adults, and 26 evaluated interventions targeted alcohol consumption. Meta-analysis was conducted. E-health interventions included those that used websites, computers, e-mail, mobile phones, etc as a component of the intervention. Thus, the intervention was outside the health sector and this review was not relevant.

Park and Drake (2015),

Park, E., & Drake, E. (2015). Systematic review: internet-based program for youth smoking prevention and cessation. *Journal of Nursing Scholarship*, *47*(1), 43-50.

Systematic Review: Internet-Based Program for Youth Smoking Prevention and Cessation

This review included 12 primary studies evaluating internet-based smoking cessation or prevention intervention programs for young people (< 24 years). Several internet-based programs were delivered in school or community settings. The intervention outcome was smoking behaviour. Thus, the intervention was conducted outside the health sector and intervention outcome was not substance use and the review was therefore not relevant.

Peirson et al. (2016),

Peirson, L., Ali, M. U., Kenny, M., Raina, P., & Sherifali, D. (2016). Interventions for prevention and treatment of tobacco smoking in school-aged children and adolescents: a systematic review and meta-analysis. *Preventive Medicine*, *85*, 20-31.

Interventions for prevention and treatment of tobacco smoking in school-aged children and adolescents: A systematic review and meta-analysis - ScienceDirect

This review included 9 primary studies (RCTs) evaluating effectiveness of primary care relevant behavioural interventions to prevent and treat tobacco smoking in school-aged children and adolescents. Thus, the intervention outcome is not substance (alcohol or drug) use, and the review was therefore not relevant.

Reavley (2010),

Reavley, N., & Jorm, A. F. (2010). Prevention and early intervention to improve mental health in higher education students: a review. *Early Intervention in Psychiatry*, *4*(2), 132-142.

Prevention and early intervention to improve mental health in higher education students: a review - Reavley - 2010 - Early Intervention in Psychiatry - Wiley Online Library

This umbrella review assessed effectiveness of interventions to prevent mental health problems (e.g. anxiety, depression, alcohol misuse) in young people. The umbrella review included reviews and primary studies. With regard to interventions targeting alcohol misuse, the umbrella review assessed several reviews focussing on various kinds of interventions:

- Carey KB, Scott-Sheldon LA, Carey MP, DeMartini KS. Individual-level interventions to reduce college student drinking: a meta-analytic review. *Addictive Behaviors* 2007; **32**: 2469–94.
- Larimer ME, Cronce JM. Identification, prevention, and treatment revisited: individual-focused college drinking prevention strategies 1999–2006. *Addict Behav* 2007; **32**: 2439–68.
- Moreira MT, Smith LA, Foxcroft D. Social norms interventions to reduce alcohol misuse in University or College students. *Cochrane Database Syst Rev* 2009; (**3**): CD006748.
- Riper H, Van Straten A, Keuken M, Smit F, Schippers G, Cuijpers P. Curbing problem drinking with personalized-feedback interventions: a meta-analysis. *Am J Prev Med* 2009; **36**: 247–55.
- Toomey TL, Lenk KM, Wagenaar AC. Environmental policies to reduce college drinking: an update of research findings. *J Stud Alcohol Drugs* 2007; **68**: 208–19.

None of these reviews were considered relevant and hence this umbrella review was not relevant.

Riper (2009),

Riper, H., van Straten, A., Keuken, M., Smit, F., Schippers, G., & Cuijpers, P. (2009). Curbing problem drinking with personalized-feedback interventions: a meta-analysis. *American Journal of Preventive Medicine*, *36*(3), 247-255.

Curbing Problem Drinking with Personalized-Feedback Interventions: A Meta-Analysis - ScienceDirect

This review included 14 primary studies evaluating personalized feed-back interventions. All but one were conducted in non-clinical settings (e.g. community, education, work). Thus, the intervention context was mainly outside the health sector and therefore, this review was not relevant.

Riper et al. (2014),

Riper, H., Blankers, M., Hadiwijaya, H., Cunningham, J., Clarke, S., Wiers, R., ... & Cuijpers, P. (2014). Effectiveness of guided and unguided low-intensity internet interventions for adult alcohol misuse: a meta-analysis. *PloS one*, *9*(6), e99912.

pone.0099912 1..11

This review included 16 primary studies (RCTs) evaluating effects of internet-based interventions on adult alcohol consumption. The interventions occurred outside the health sector and therefore this review was not relevant.

Scott- Sheldon et al. (2014),

Scott-Sheldon, L. A., Carey, K. B., Elliott, J. C., Garey, L., & Carey, M. P. (2014). Efficacy of alcohol interventions for first-year college students: a meta-analytic review of randomized controlled trials. *Journal of Consulting and Clinical Psychology*, *82*(2), 177.

Efficacy of Alcohol Interventions for First-Year College Students: A Meta-Analytic Review of Randomized Controlled Trials - PMC

This review included 41 primary studies (RCTs) evaluating efficacy of brief interventions to curb alcohol consumption, delivered to first year college students, and typically at large public universities in the USA. This review is was therefore not relevant.

Scott-Sheldon et al. (2016),

Two review studies were identified that could be relevant:

Scott-Sheldon, L. A., Lantini, R. C., Jennings, E. G., Thind, H., Rosen, R. K., Salmoirago-Blotcher, E., & Bock, B. C. (2016). Text messaging-based interventions for smoking cessation: a systematic review and meta-analysis. *JMIR mHealth and uHealth*, *4*(2), e5436.

This review included 20 studies/publications using RCT, evaluating efficacy of text messaging on smoking cessation. This review is not included in the assessment of Screening and brief interventions for substance use in the health sector.

Scott-Sheldon, L. A., Carey, K. B., Kaiser, T. S., Knight, J. M., & Carey, M. P. (2016). Alcohol interventions for Greek letter organizations: A systematic review and meta-analysis, 1987 to 2014. *Health Psychology*, *35*(7), 670.

This review included 15 primary studies evaluating an individual-level alcohol intervention among college students, assumingly at college campus. This review is not included in the assessment of Screening and brief interventions for substance use in the health sector.

Smedslund (2011),

Smedslund, G., Berg, R. C., Hammerstrøm, K. T., Steiro, A., Leiknes, K. A., Dahl, H. M., & Karlsen, K. (2011). Motivational interviewing for substance abuse. *Campbell Systematic Reviews*, *7*(1), 1-126.

Motivational interviewing for substance abuse

This systematic review and meta-analysis included 59 primary studies (RCTs) evaluating effectiveness of motivational interviewing on substance use or treatment retention among people with substance use dependence or abuse. The target population was therefore not people at-risk of substance abuse and this review was not relevant.

Smedslund et al. (2017),

Smedslund, G., Wollscheid, S., Fang, L., Nilsen, W., Steiro, A., & Larun, L. (2017). Effects of early, computerized brief interventions on risky alcohol use and risky cannabis use among young people. *Campbell systematic reviews*, *13*(1), 1-192.

Effects of early, computerized brief interventions on risky alcohol use and risky cannabis use among young people - Smedslund - 2017 - Campbell Systematic Reviews - Wiley Online Library

This systematic review and meta-analysis included 60 primary studies (RCTs) evaluating effectiveness of standalone computerized brief interventions on alcohol and cannabis use among young (15-25 years) people. This review included all types of early, computerized brief interventions regardless of the type of electronic device, provider or theoretical framework. All but one study were RCTs with allocation of individuals. There was one cluster-RCT. Most of the studies were conducted at a university or college (N = 51). The settings for the remaining studies were the general population (N = 5), and emergency departments (N = 4). Hence, the majority of primary studies were conducted outside the health sector and therefore this review is not relevant.

Tait (2003),

Tait, R. J., & Hulse, G. K. (2003). A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug. *Drug and Alcohol Review*, *22*(3), 337-346.

systematicreviwefectivensesbriefinterventionssubstancedrug.pdf

This systematic review and meta-analysis included 11 primary studies evaluating effectiveness of brief interventions among adolescents. 2 studies examined effects on tobacco use. Interventions occurred across a wide range of settings, including dental clinic, schools, universities, substance treatment centres. This review was therefore not relevant.

Tait et al. (2013),

Tait, R. J., Spijkerman, R., & Riper, H. (2013). Internet and computer based interventions for cannabis use: a meta-analysis. *Drug and Alcohol Dependence*, *133*(2), 295-304.

Internet_and_computer_based_intervention20160305-32337-113fl6b-libre.pdf

This systematic review and meta-analysis included 10 primary studies evaluating effectiveness of computer and internet-based interventions in reducing frequency of cannabis use among adolescents. For all but one study, the intervention occurred on internet at home. This review is not included in the assessment of Screening and brief interventions for substance use in the health sector.

Vasilaki (2006),

Vasilaki, E. I., Hosier, S. G., & Cox, W. M. (2006). The efficacy of motivational interviewing as a brief intervention for excessive drinking: a meta-analytic review. *Alcohol and Alcoholism*, *41*(3), 328-335.

agl016.pdf

This systematic review and meta-analysis included 22 studies examining efficacy of motivational interviewing in reducing alcohol consumption. In all studies, participants' drinkers status was alcohol abuse or alcohol dependent. Thus, these participants were not "people who might be at risk because of their substance use but who would not necessarily seek treatment", and therefore this review was not relevant.

Watson et al. (2013),

Watson, J. M., Fayter, D., Mdege, N., Stirk, L., Sowden, A. J., & Godfrey, C. (2013). Interventions for alcohol and drug problems in outpatient settings: a systematic review. *Drug and Alcohol Review*, *32*(4), 356-367.

DAR_Outpatients_Sys_Review_2013-libre.pdf

This systematic review identified interventions for alcohol or illicit drug misuse problems that have been evaluated for hospital outpatient populations. Thus, the target population was not at-risk of alcohol or drug problems and therefore this review was not relevant.

Wood et al. (2014),

Wood, S. K., Eckley, L., Hughes, K., Hardcastle, K. A., Bellis, M. A., Schrooten, J., ... & Voorham, L. (2014). Computer-based programmes for the prevention and management of illicit recreational drug use: a systematic review. *Addictive Behaviors*, *39*(1), 30-38.

Computer-based programmes for the prevention and management of illicit recreational drug use: A systematic review - ScienceDirect

This review included 10 primary studies evaluating effectiveness of computer-based programmes to prevent or reduce illicit drug use. The interventions varied considerably, some delivered individual therapy (e.g. CBT) over longer periods of time to people with substance use disorder, some delivered personalised feedback on substance use, some were school-based social skills training programs. This review was therefore not relevant.

Young et al. (2014).

Young, M. M., Stevens, A., Galipeau, J., Pirie, T., Garritty, C., Singh, K., ... & Moher, D. (2014). Effectiveness of brief interventions as part of the Screening, Brief Intervention and Referral to Treatment (SBIRT) model for reducing the nonmedical use of psychoactive substances: a systematic review. *Systematic Reviews*, *3*, 1-18.

2046-4053-3-50.pdf

This review included 5 studies (RCTs) evaluating effectiveness of BI as part of SBIRT for reducing non-medical use of psychoactive substances (excluding alcohol, nicotine). This review was relevant and further description is presented in the assessment of relevant studies.

Best Practice Portal:

1. **Search term = "brief intervention" (no other specifications)**

Brief intervention to reduce alcohol use ('likely to be beneficial'):

Schweer-Collins et al., 2023

Schweer-Collins, M. L., Parr, N. J., Saitz, R., & Tanner-Smith, E. E. (2023). Investigating for whom brief substance use interventions are most effective: An individual participant data meta-analysis. *Prevention Science*, *24*(8), 1459-1482.

Investigating for Whom Brief Substance Use Interventions Are Most Effective: An Individual Participant Data Meta-analysis

This systematic review and meta-analysis included 29 trials and compared effectiveness of BIs across patient socio-demographic factors. This review was relevant and further description is presented in the assessment of relevant studies.

Brief intervention to reduce cannabis use in health care ('unknown effectiveness'):

Imtiaz et al., 2020:

Imtiaz, S., Roerecke, M., Kurdyak, P., Samokhvalov, A. V., Hasan, O. S., & Rehm, J. (2020). Brief interventions for cannabis use in healthcare settings: systematic review and meta-analyses of randomized trials. *Journal of addiction medicine*, *14*(1), 78-88.

https://journals.lww.com/journaladdictionmedicine/Citation/2020/02000/Brief_Interventions_for_Cannabis_Use_in_Healthcare.11.aspx#

This systematic review and meta-analysis included 9 primary studies evaluating efficacy of BI in health care settings on cannabis use. This review was relevant and further description is presented in the assessment of relevant studies.

Brief intervention in medical settings to reduce use and harms ('unknown effectiveness'):

Tanner-Smith et al., 2021:

Tanner-Smith, E. E., Parr, N. J., Schweer-Collins, M. L., & Saitz, R. (2021). Effects of Brief Substance Use Interventions Delivered in General Healthcare Settings: A Systematic Review and Meta-Analysis. *Grantee Submission*.

https://onlinelibrary.wiley.com/doi/10.1111/add.15674

This review included 111 trials evaluating effects of BI delivered in general medical settings on alcohol or drug use. This review was relevant and further description is presented in the assessment of relevant studies.

Brief intervention to reduce BZD use ('unknown effectiveness'):

Darker et al., 2015:

Darker, C. D., Sweeney, B. P., Barry, J. M., Farrell, M. F., & Donnelly-Swift, E. (2015). Psychosocial interventions for benzodiazepine harmful use, abuse or dependence. *Cochrane database of systematic reviews*, (5).

https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD009652.pub2/full

This review included 25 primary studies evaluating effectiveness of various psychosocial interventions (including MI) to reduce benzodiazepine use in opiate dependent and non-opiate dependent patients. Thus, the target population was not at-risk and this review was not relevant.

Primary care interventions to prevent/reduce substance use adolescents ('unknown effectiveness'):

O'Connor et al., 2020:

O'Connor, E., Thomas, R., Senger, C. A., Perdue, L., Robalino, S., & Patnode, C. (2020). Interventions to prevent illicit and nonmedical drug use in children, adolescents, and young adults: updated evidence report and systematic review for the US Preventive Services Task Force. *Jama*, *323*(20), 2067-2079.

https://jamanetwork.com/journals/jama/fullarticle/2766429

This review included 29 RCTs or other controlled studies evaluating effects of primary care based behavioural interventions to prevent/reduce illicit drug or non-medical pharmaceutical drug use in children and adolescents. The interventions varied substantially in dose (interquartile range, 1-10 sessions) and in duration (interquartile range 1 day – 6 weeks). 12 of the 29 trials were delivered exclusively through a computer, and only 7 trials took place in primary care settings. This review was therefore not relevant.

Emergency department-based brief intervention to reduce use and harms ('unknown effectiveness'):

EMCDDA, 2016:

https://www.euda.europa.eu/publications/papers/2016/emergency-department-based-brief-interventions_en

Observatoire Européen des Drogues et des Toxicomanies. (2016). *Emergency department-based brief interventions for individuals with substance-related problems: a review of effectiveness*. Publications Office of the European Union.

This umbrella review included 5 SRs and 16 RCTs assessing effectiveness of brief intervention in emergency department setting. The umbrella review was not considered relevant.

Kaczorowski et al., 2020:

Kaczorowski, J., Bilodeau, J., M Orkin, A., Dong, K., Daoust, R., & Kestler, A. (2020). Emergency department–initiated interventions for patients with opioid use disorder: a systematic review. *Academic Emergency Medicine*, *27*(11), 1173-1182.

https://onlinelibrary.wiley.com/doi/10.1111/acem.14054

This systematic review included 12 studies examining effects of Emergency department-initiated brief interventions aiming at harm reduction for patients with opioid disorder. Thus, the target population was not at-risk and this review was not relevant.

Search term 'motivational interviewing':

MI to reduce illicit drug use in adolescents ('unknown effectiveness'):

Li et al., 2015:

Li, L., Zhu, S., Tse, N., Tse, S., & Wong, P. (2016). Effectiveness of motivational interviewing to reduce illicit drug use in adolescents: a systematic review and meta-analysis. *Addiction*, *111*(5), 795-805.

https://onlinelibrary.wiley.com/doi/abs/10.1111/add.13285

This systematic review and meta-analysis included 10 RCTs examining effectiveness of motivational interviewing on illicit drug use among adolescents. The settings for MI included clinics (n=2), schools, community and incarceration. Thus, the intervention was mainly conducted outside the health sector and therefore this review was not relevant.

School-based BI:

(Carney et al., 2016)

Carney, T., Myers, B. J., Louw, J., & Okwundu, C. I. (2016). Brief school-based interventions and behavioural outcomes for substance-using adolescents. *Cochrane database of systematic reviews*, (1).

cochranelibrary.com/cdsr/doi/10.1002/14651858.CD008969.pub3/pdf/full

This systematic review and meta-analysis included 6 RCTs evaluating effectiveness of brief school-based interventions in reducing substance use among adolescents. Thus, the intervention was conducted outside the health sector and therefore this review was not relevant.

Xchange registry

Search term 'brief intervention':

None

Search term 'motivational interviewing':

none relevant

Table 1. Overview of referenced reviews for Brief interventions in ISDUP 2nd edition and in Best Practice Portal description of review characteristics, assessment of relevance and reasons for lack of relevance.

Author/Year	Syste-matic review?	Meta-analysis	Rele-vant?	Reason(s) for not relevant
Ashton et al. (2015)	Yes	No	No	Not health sector
Baker et al. (2012) (2 possible publications)	Yes (both)	No (both)		Target populations with severe specific health problems (both)
Bertholet (2005) (g)	Yes	No	Yes	
Carey et al. (2012)	Yes	Yes	No	Not health sector
Carey et al. (2016)	Yes	Yes	No	Not health sector
Carney (2012) (a)	Yes	Yes	No	Not health sector
Carney et al. (2014)	Yes	Yes	No	Not health sector
Christakis (2003) (a)	Yes	No	No	Not substance use outcome
Davis et al. (2017)	Yes	Yes	No	Heterogeneity: interventions, contexts, target populations
Dedert et al. (2014)	Yes	Yes	No	Heterogeneity: contexts, target populations, outcomes
Dedert et al. (2015)	Yes	Yes	No	Heterogeneity: contexts, target populations, outcomes
Diestelkamp et al. (2016)	Yes	Yes	Yes	
Donoghue et al. (2014)	Yes	Yes	No	Not health sector
Dotson et al. (2015)	Yes	Yes	No	Not health sector
Dunn (2001) (a)	Yes	Yes	No	Target population not at-risk, interventions differ from typical BI
Elzerbi et al. (2015)	Yes	Yes	Yes	
Elzerbi et al. (2017)	Yes	Yes	Yes	
Foxcroft et al. (2015) (?) 2 possible publications			No	1) Not in health sector 2) Withdrawn publication
Foxcroft et al. (2016)	Yes	Yes	No	Not health sector
Gulliver et al. (2015)	Yes	Yes	No	Not health sector, outcome mainly tobacco use
Hennessy and Tanner-Smith (2015)	Yes	Yes	No	Not health sector
Hennessy et al. (2015)	Yes	Yes	No	Not health sector
Jensen (2011) (a)	Yes	Yes	No	Not health sector
Jiang and Gao (2017)	Yes	No	No	Not health sector
Kaner (2007) (g)	Yes	Yes	Yes	
Kazemi et al. (2013)	No	No	No	Not health sector
Landy et al. (2016)	Yes	No	Yes	
Leeman et al. (2015)	Yes	No	No	Not health sector
McGinnes et al. (2016)	Yes	No	Yes	
Merz et al. (2015)	Yes	No	Yes	
Moreira (2009)	Yes	Yes	No	Not in health sector
Newton et al. (2013)	Yes	No	Yes	
Oosterveen et al. (2017)	Yes	Yes	No	Not health sector
Park and Drake (2015)	Yes	No	No	Smoking behaviour outcome, not health sector
Peirson et al. (2016)	Yes	Yes	No	Outcome not substance use

Reavley (2010)	No	No	No	Umbrella review, none of included reviews were relevant
Riper (2009) (g)	Yes	Yes	No	Not health sector
Riper et al. (2014)	Yes	Yes	No	Not health sector
Scott- Sheldon et al. (2014)	Yes	Yes	No	Not health sector
Scott-Sheldon et al. (2016) (2 possible publications)	Yes (both)	Yes (both)	No (both)	Not health sector (both), outcome not substance use (one).
Smedslund (2011) (g)	Yes	Yes	No	Target population not at-risk
Smedslund et al. (2017)	Yes	Yes	No	Not health sector
Tait (2003) (a)	Yes	Yes	No	Not health sector
Tait et al. (2013)	Yes	Yes	No	Not health sector
Vasilaki (2006) (a)	Yes	Yes	No	Target population not at-risk
Watson et al. (2013)	Yes	No	No	Target population not at-risk
Wood et al. (2014)	Yes	No	No	Heterogeneity in intervention content and context, target population
Young et al. (2014)	Yes	No	Yes	
Referenced studies in Best Practice Portal (Evidence base)				
Schweer-Collins et al., 2023	Yes	Yes	Yes	
Imtiaz et al., 2020	Yes	Yes	Yes	
Tanner-Smith et al., 2021	Yes	Yes	Yes	
Darker et al., 2015		Yes	No	Target population not at-risk, interventions were mainly treatment modalities
Lynch et al., 2021	Yes	Yes	Yes	
O'Connor et al., 2020	Yes	Yes	No	Not brief intervention, mainly outside health sector
EMCDDA, 2016	Um-brella		No	Not systematic review
Kaczorowski et al., 2020	Yes	No	No	Target population not at-risk
Li et al., 2015	Yes	Yes	No	Outside health sector
Carney et al., 2016	Yes	Yes	No	Outside health sector

Review of referenced studies on brief interventions in health care sector to prevent substance use in target population

Studies referenced in ISDUP:

Bertholet et al., 2005 (1)

This systematic review and meta-analysis included 19 RCTs of brief alcohol intervention (BAI) on at-risk drinkers in primary health care/outpatient settings, 17 of these trials reported on at least 1 quantified alcohol consumption measure outcome. Primary studies were published between 1987 and January 2003. Alcohol-treatment seeking patients were excluded. Eligible interventions were: 1) individual, focussing on alcohol consumption with a face-to-face component during initial session; 2) interventions defined as 'brief intervention' or 'motivational intervention' or reporting the use of feed-back or advice to reduce alcohol consumption. No restrictions on repeated interventions or reinforcement sessions. Study size ranged from 80 to 774 persons, with a total of 5 639 persons. Most trials included subjects of both genders (13 trials), the remainder included male subjects only. Duration of follow-up were 6 months (4 studies), 12 months (11 studies) or longer (between 18 and 48 months: 4 studies).

Among the 17 trials reporting alcohol consumption outcome, 8 reported statistically significant intervention effect (in favourable direction), 7 reported no significant effects and 2 reported statistically significant effects on secondary measures only. None reported negative intervention effects.

Intention-to-treat and meta-analysis was performed on all studies reporting follow-up data at 6 or 12 months (only small difference in effect size between 6 and 12 months follow-up). Small difference in effect size by gender. Overall, a statistically significant effect of BAI was found: Weighted mean difference was – 38 grams pure alcohol/week (appr 4 drinks per week) (CI – 51 to -24 grams/week) in favour of the intervention group.

The study concluded that "Focusing on patients in primary care, our systematic review and meta-analysis indicated that brief alcohol intervention is effective in reducing alcohol consumption at 6 and 12 months. »

Diestelkamp et al., 2016 (2)

This systematic review included 7 RCTs evaluating efficacy of brief interventions (BI) in emergency departments (ED) targeting young people (12 – 25 years) admitted to ED after an alcohol-related event (i.e. self-reported alcohol consumption within 6 hours prior to admission or alcohol use having led to hospitalisation). The intervention was: - brief (between 30 and 60 minutes); - max 3 sessions and at least 1 delivered in ED; - focused on alcohol and delivered in person. Interventionists were either trained counsellors and psychologists (n= 4) or special trained research staff. Some studies (n=4) provided additional booster sessions.

Control condition was: - minimal active (standard care and/or educational brochure) (n=5) and intervention different from BI (i.e. enhanced BI vs BI) (n=2).

Outcome measures included: - alcohol consumption, alcohol-related risk behaviours, alcohol-related negative consequences and/or alcohol treatment seeking.

Meta-analysis was precluded due to heterogeneous study methodology (different control conditions) and different booster delivery modes.

Among the 5 RCTs comparing BI to minimal active control, 3 studies reported significant beneficial effect of BI; ether on alcohol consumption, or alcohol related harms or referral to treatment. In both of the 2 RCTs comparing enhanced BI to BI, a beneficial effect of enhanced BI was reported for one of examined outcomes or a participant subgroup.

An additional 8 publications were included in the review; 6 practice projects, 1 non-randomised pilot study and 1 observational study.

Six of the 7 RCT studies reported reductions of alcohol consumption following the ED visit in both intervention and control group. One of 4 studies reported reduction in alcohol related harm.

The authors noted that effects relate to heterogeneous outcomes and are limited to a small share in assessed outcomes. They further discussed possible explanations to the observed reduction in control groups (e.g. assessment reactivity, research participation effects, regression to the mean) and that some minimal intervention also in the control groups may have contributed to a systematic underestimation of effects under real-world conditions.

Acceptance of BI by patients or clinic staff was systematically assessed in 3 studies. One of these reported that a majority (75.9 %) of study participants rated the intervention as ‘very good, ‘good’ or ‘satisfactory’. Another study reported that 77.5 % of participants would recommend the BI to a friend in a similar situation and 60 % of clinic staff rated the BI programme as being a valuable addition to ED standard care.

The authors concluded that in Europe, there are a number of BI programmes targeting adolescents in EDs following alcohol related events that are implemented in clinical practice, however evidence regarding their effectiveness and feasibility is limited.

Elzerbi et al., 2015 (3)

This systematic review and meta-analysis included 20 RCTs conducted in primary health care (PHC) settings and 8 RCTs conducted in emergency department (ED) settings, examining overall efficacy of brief intervention to reduce hazardous and harmful alcohol consumption at 6 months and 12 months follow-up. Brief intervention (BI) was understood as “opportunistic screening and early intervention (no more than four sessions, each session lasting no longer than 30 minutes) delivered by non-specialist personnel carried out in nonspecialist settings.” BIs were applied specifically in PHC or ED settings. Participants were “non-treatment-seeking and met a minimum criterion of hazardous or harmful drinking (hazardous and harmful drinking was understood as regular average consumption of 20–40 g and >40 g of alcohol per day for women and 40–60 g and >60 g per day for men, respectively.”

Trials were excluded for several reasons, including: - special populations (older people, diabetes/hypertension patients) or dependent drinkers, - only longer follow-up (2 years), - failure to report useable standard outcomes (e.g. standard deviation).

Primary outcome measure was reduction in grams of alcohol consumed per week.

For studies in PHC settings, 20 trials were identified (total n= 8 226); 13 European trials (n= 4564), 7 non-European trials (n= 3 662) (5 in North America). The majority of participants were middle-aged white males. Overall, at 6 months follow-up, the intervention groups consumed on average 22 gr alcohol/week less than the control groups (95% CI: - 37 to -7 gr/week), the corresponding figure at 12 months follow-up was 31 grams/week (95% CI: - 46 to -15 gr/week).

For studies in ED settings, 8 study trials (4 in European countries and 4 in non-European countries) with a total of 4 799 participants (European=2 465/non-European=2 334) were identified as eligible and included in the meta-analysis. Overall, at 6 months follow-up, the intervention groups consumed on average 18 gr alcohol/week less than the control groups (95% CI: - 30 to -6 gr/week), the corresponding figure at 12 months follow-up was 18 grams/week (95% CI: - 27 to -10 gr/week).

The authors noted that "The magnitude of difference in effect size for BI compared to control groups in ED settings may have been determined partially by structural barriers to implementing BIs, such as a high turnover of ED personnel, staff having an inadequate amount of time to carry out BIs with patients and lack of staff training and knowledge regarding alcohol problems [73,74]. A European trial [68] and a North American trial [75] included in the present ED meta-analysis, for instance, failed to show favourable treatment effects for alcohol BI when delivered in ED settings. In the case of ED studies, however, a meaningful interpretation of the differences between BI and control groups is limited because of the high number of ED studies excluded at the review stage and the small number of studies included in the meta-analysis."

The authors concluded that "Brief intervention (BI) to reduce alcohol consumption is associated with reducing grams of alcohol consumed per week among hazardous and harmful drinkers at 6- and 12-month follow-up in primary health care and emergency department trials. The geographical region in which trials are undertaken does not appear to explain the variance in trial outcomes for reducing alcohol consumption.»

Elzerbi et al., 2017 (4)

This systematic review and meta-analysis compared efficacy of alcohol brief interventions (ABI) in emergency department (ED) settings for two study populations; targeted injury and noninjury specific. The review included 23 high-quality and methodologically similar RCTs (total n= 15 173), 9 trials targeted injury patients in ED and 14 trials targeted non-injured patients in ED. Brief intervention (BI) was understood as opportunistic screening and early intervention; BI was max 4 sessions of max 45 minutes, delivered: - face-to-face, - by SMS, - detailed health information workbook, - over telephone or -electronically, by nonspecialist personnel, and applied specifically in ED settings. Participants were not seeking treatment for alcohol use and met a minimum criterion for hazardous or harmful drinking (measured in terms of grams of alcohol/day, AUDIT, CAGE, et.). Outcome was quantity of alcohol consumption at follow-up points $\leq$ 5, 6 or 12 months. Meta-

analyses were conducted for two populations; injured and non-injured ED patients and for three follow-up points; ≤ 5 months, 6 months and 12 months.

For non-injured patients, meta-analysis found a statistically significant effect in favour of BI at ≤ 5 months and 12 months follow-up, the effect estimate being higher at ≤ 5 months than at 12 months follow-up.

For injured patients, meta-analysis found a statistically significant effect in favour of BI at 6 months follow-up only. Effect estimates were negative (in favour of BI) but not statistically significant for non-injured patients at 6 months follow up and for injured patients at ≤ 5 months and 12 months follow-up. However, the authors noted that inclusion of hospitalized patients in targeted injury studies and the inclusion of injured patients in the non-injury specific studies limited the interpretation of this finding.

Kaner et al., 2007 (5)

This systematic review and meta-analysis evaluated effectiveness of brief intervention (BI) delivered in general practice or emergency department for reducing alcohol consumption.

The study included 24 controlled trials administered in general practice and 5 controlled trials in accident and emergency departments (ED) (the latter were considered as primary health care).

Brief intervention was 1 to 5 individual sessions (from 1 to 50 minutes) and total intervention exposure time ranged from a mean of 7.5 minutes to 60 minutes. Professions administering the intervention were general practitioners, nurse practitioners or psychologists. Intervention content included any or all of: motivational interviews, cognitive behavioural therapy, self-completed action plans, leaflets (general health or alcohol specific), requests to keep drinking diaries, written personalized feedback, follow-up telephone counselling and exercises to complete at home.

Meta-analysis included 22 trials (total n= 7619, mean age = 43 years and 67 % male) and did not distinguish between BIs in primary health care (e.g. general practitioner) and ED. 18 trials reported outcomes after 12 months follow-up, 2 trials had longer follow-up (18 months and 36 months), and 2 trials had shorter follow-up (6 months and 3 months). At follow-up, the intervention groups drank less than the control groups (mean difference= 39 grams alcohol/week, 95 % CI: - 54 to – 23 grams/week). Most trials (20 of 22) reported statistically significant effect in favour of intervention. Sensitivity analysis, using intention-to-treat data, obtained similar results.

Meta-analysis sub-grouped by gender was performed for 6 studies and found a significant intervention effect for men, whereas the intervention effect was for women was not statistically significant. However, this finding may have been heavily influenced by one primary study which reported a marked reduction in alcohol consumption in the control group and had several methodological weaknesses.

The authors concluded as follows: “Our data indicate that brief alcohol intervention in primary care contexts results in significant reductions in weekly consumption for men, with an average drop of about 6 standard drinks per week in patients compared to controls. The review showed no significant reduction in alcohol consumption for women; although this may be partly due to low statistical

power (as trials reporting outcomes from women only enrolled 499 participants), brief interventions for women are not yet justified."

Landy et al., 2016 (6)

This review aimed at providing an updated review of the literature on the effectiveness of brief interventions (BIs) for alcohol misuse in emergency departments (ED). The review included 34 publications, most of them (not clear exactly how many) were pre/post designs and randomized control trials. In addition, one meta-analysis, one review article, one retrospective observational study, two papers summarizing results from several studies and "a few studies that involved secondary analyses" were also included. Inclusion criteria: English publication, examined efficacy of BI targeting alcohol misuse (i.e. BI aimed to reduce alcohol use), ED setting and majority of participants 18 – 65 years.

All studies conformed to conventional definition of BI: a single session intervention, typically lasting between 5 and 30 minutes.

Studies varied regarding comparison condition; in many studies (not stated how many), the BI was compared to a control condition, other comparison conditions included information booklet/printed material, or assessment or usual care, or extended counselling or no comparison. Follow-up periods were 3, 6 or 12 months.

Among 33 included studies (according to the text), 17 were rated as high in rigor, 13 were rated as moderate, and 3 were rated as low. Table 1 shows that for two studies/trials there were 2 publications, thus altogether 31 trials were included and among these 31, 16 trials were rated as 'strong' (high in rigor), 12 were rated as 'moderate', and 3 were rated as 'weak'. Sample sizes varied substantially, from 26/20 in intervention/control group to 737/756. The study populations seem heterogenous regarding baseline alcohol consumption level, although this is only reported for a minority of studies. For some studies, participants were included if AUDIT-score exceeded 8 or was below 19, and in one study, participants screened positive for alcohol use disorder.

The review reports on various outcomes: alcohol consumption at 6 months, alcohol consumption at 12 months, emergency department admissions and hospitalizations, alcohol-related injuries, and alcohol-related risky behaviour. No meta-analysis was conducted. The authors reported for each outcome the main finding of each study along with study rigor rating (text and Table 1). Studies were rated 'strong' if they were tightly controlled (i.e., RCTs) and used reliable and valid measures, blind coders, reported important details (e.g., recruitment method, sample size, attrition), employed appropriate statistical tests, and reported relevant statistical information (e.g., type of statistical test performed, p-values, effect sizes). Among studies rated as 'strong', 3 of 6 studies reported significantly greater reduction in alcohol consumption at 6 months follow-up in the intervention group as compared to control group. At 12 months follow-up 4 of 11 studies rated as 'strong' found greater reduction in alcohol consumption in favour of the intervention group. One of 5 'strong' studies found favourable effects of BI on ED re-admission during 12 months follow-up. One of 2 'strong' studies found favourable effect of BI on alcohol-related injuries during follow-up, and 2 studies (one 'strong' and one 'moderate') both found favourable effects of BI, the 'strong' study reported significantly less likelihood of arrest for drink-driving in the intervention group.

Thus, this review suggests brief interventions targeting 'alcohol misuse' and performed in emergency departments may be effective in reducing alcohol consumption or reducing risk of alcohol-related harm. The inclusion of small sample primary studies, heterogeneous study populations regarding baseline alcohol consumption level (at-risk drinking or alcohol use disorder), heterogeneous comparison conditions and lack of meta-analysis of effectiveness limits the usefulness of this review.

McGinnes et al., 2016 (7)

This systematic review examined effectiveness of ultra-brief interventions (ultra-BIs) in emergency departments (ED) on reducing alcohol consumption.

The review included 19 papers based on 13 trials (12 RCTs and 1 quasi-randomised trial). Participants were people presenting at ED with an alcohol-related injury (2 studies) or any presentation (11 studies). All participants were screened for alcohol use by questionnaire or/and laboratory testing. Ultra BI was present with face-to-face interaction (10 min or less) in 6 studies; computer intervention in 3 studies; mobile phone intervention in 2 studies; and pamphlet only in 2 studies. Intervention was delivered by various people: research assistant or social worker, health personnel/ED staff, or by computer/text message. Outcomes were change in alcohol consumption (11 studies), change in frequency of use (1 study), binge drinking (9 studies), AUDIT score (2 studies), and return to ED (2 studies). Outcomes were variously measured at 6 weeks, 3 months, 6 months and 12 months. Of the 13 studies, 1 was described as a pilot, and – according to authors – 5 lacked sufficient power to show effect (due to small sample or large loss to follow up). Moreover, control conditions varied across studies and several included studies compared two interventions often without non-intervention control groups. No meta-analysis was conducted.

The review found that six RCT studies reported a significant reduction in alcohol consumption quantity at 3 months follow-up and a smaller effect at 12 months follow-up.

The authors noted in the Discussion section: "Despite broad support for public health and health promotion in ED, given the limited proven effectiveness and barriers to implementation, it appears to be a low priority for ED clinicians to perform an ultra-BI targeted at alcohol use. This review highlights the lack of any strong evidence for recommending a specific ultra-BI. Future research should focus on identifying the most acceptable and workable ultra-BIs for patients and staff in the ED, using a standardised study protocol."

The authors motivate the review study with several important points, including: 1) ED patients may be more amenable to an alcohol harm-related intervention, particularly those who can attribute their attendance to alcohol, a concept termed 'the teachable moment'; 2) WHO recognises the ED population to be an at-risk group that should receive alcohol 'Screening Brief Intervention and Referral to Treatment' (SBIRT); 3) In the USA, since 2007, it has been mandatory for all level 1 Trauma Centres to offer SBIRT to all patients; 4) Ultra-BIs of less than 10 min duration or using technology may offer a pragmatic approach overcoming barriers that clinicians have identified.

Merz et al., 2015 (8)

This systematic review assessed effectiveness of brief interventions to reduce alcohol use and/or alcohol related problems in young adults (18 – 24 years) admitted to an emergency department (ED) following alcohol intoxication. The review included 4 RCTs (total n= 618) comparing a brief motivational interview (30 – 45 minutes) with usual care, personalised feed-back or and educational brochure. Intervention was carried out by trained ED staff within ED (2 studies), by trained psychologist in ED (1 study) or by nurse 10 days post injury in outpatient clinic (1 study). Three of the 4 primary studies reported a favourable effect of the intervention at follow-up (3 months, 6 months or 12 months), either on alcohol related problems only (1 study) or on both alcohol use and alcohol related problems (2 studies). No meta-analysis was performed.

Newton et al., 2013 (9)

This systematic review synthesized evidence of the effect of emergency department (ED)-based brief interventions (BI) on reducing harmful and hazardous alcohol and other drug use and related harms in young people (21 years or younger). Altogether 9 RCTs were included, and 5 of these had high risk of bias, and for an additional 2 studies risk of bias was unclear. In 7 trials, the intervention mode was motivational interviewing (MI), primarily one-on-one. Intervention deliverers were therapists (3 studies), research team members (3 studies), peer educators (2 studies) and computers (2 studies). Control groups also varied across studies; information hand-out, standard medical care, and one-on-one MI (compared to enhanced intervention with family-based MI). In 6 studies, BI lasted for less than 1 hour (range 20 to 60 minutes), in one study the intervention lasted for 105 to 120 minutes, and in 2 studies intervention time was not reported. Participants were young people admitted to ED where ED visits were related to alcohol and/or other drug use (4 studies), any visit where patients reported history of hazardous alcohol/drug use (3 studies) or visits due to minor injuries where a small fraction was related to alcohol use. Outcomes were alcohol or/and other drug use, harms from alcohol/drug use, and health care use. Follow-up time did also vary across studies; 7 studies reported effect estimates for 2 or 3 follow-up points (3, 6, 12 months), 1 study reported for follow-up at 4 months, and 1 study reported no group differences and did not report effect estimates by follow-up time.

Altogether 50 effect estimates for various outcomes and follow-up points were reported individually in this review. Overall, the effect estimates tended to favour BI, but in most cases, they were not statistically significant.

The authors concluded that “Based on current evidence, clear benefits of using ED-based targeted or universal BI to reduce alcohol and other drug use and associated injuries or high-risk behaviours remain inconclusive.”

Young et al., 2014 (10)

This systematic review assessed the effectiveness of Brief Interventions (BIs) as part of the Screening, Brief Intervention and Referral to Treatment (SBIRT) model for reducing nonmedical use of psychoactive substances. Inclusion criteria included: randomised controlled trials (RCTs) and

intervention was opportunistic screening and then one-to-one verbal BI to those at risk of substance use harm. 5 RCTs (total n= 2369) were included and in all studies, the intervention focus was on illicit drugs, either fully or in part. Screening criteria for at-risk of substance use harm varied across studies (e.g. used 'street drugs' 4+ times in past 30 days or met criteria for prescription drug dependence or abuse (3+ score on SDS) or score on ASSIST ranging from 4 to 26). In 4 of the 5 studies, the number of screened participants were reported, and in 3 of these studies, the proportion of screened people who were randomized to intervention or control group was between 2 and 5 %, in the fourth study this proportion was 50 %. The intervention varied across studies; 1 session in-person BI for 5 to 15 minutes + written information (1 study), 4 sessions within 4 weeks with motivational interviewing (MI) for 17 - 32 minutes on average (1 study), 1 MI session (30 – 40 minutes) + 2nd MI session 4 weeks after + feedback letter 8 weeks after (1 study), and MI session for 20 minutes + telephone call for 5-10 minutes 10 days after (2 studies). Intervention settings varied, but were mainly (4 studies) in health care. Control groups were either no BI (2 studies) or written information (3 studies). Outcomes and follow-up time points varied and across the 5 studies a large number of effect estimates are presented. The review authors rated the quality of evidence as very low or low and most effect estimates were not statistically significant. The authors noted that "Due to the few included studies, results are imprecise and largely could not be assessed for consistency. The literature has important methodologic limitations leading to medium or high risks of bias for outcomes. The body of evidence, therefore, is limited given the few included studies with mainly small sample sizes and the heterogeneity in study characteristics, including the measurement of outcomes."

Studies referenced in Best practice portal:

Schweer-Collins et al., 2023 (11)

This study is a meta-analysis of individual participant data (IPD) from 29 RCTs examining the effect of brief intervention (BI) delivered in a general health care setting on substance use (alcohol or other drugs). The 29 RCTs (total n= 12 074) were identified from a parent project including 116 RCTs examining BI effects on substance use and related outcomes (reported in Tanner-Smith et al., 2021). The primary objective of the study was to explore variability in BI effects by patient demographics and severity of substance use at three follow-up time points (3-, 6- and 12-months post-baseline). BI was delivered in 4 or fewer sessions. Control condition was no treatment, straw-person, sham intervention, or practice as usual. Most trials target mixed alcohol and other drug use or alcohol only. Most interventions were delivered in-person and at emergency department or community health care settings. Sub-group analyses of effect estimates were carried out for 6 individual characteristics (age group, gender, education level, employment, marital status, baseline severity of substance use) and 3 follow-up time points (3-, 6 - and 12- months post treatment) and for 14 outcomes (binge drinking, alcohol frequency, alcohol quantity, cannabis frequency, cannabis quantity, tobacco use, other drug use, alcohol-related consequences, drug-related consequences, mental health symptoms, physical health symptoms, substance use service utilization, emergency department utilization, and readiness to change). Notably, for most of these outcomes, effects were not estimable for all individual characteristics and follow-up time points.

The sub-group and follow-up time specific effect estimates were mainly not statistically significant with 5 exceptions. Favourable effect of BI on: - heavy episodic drinking, - frequency of alcohol use, - alcohol-related consequences, and - treatment utilization was statistically significant for females, but not for males at 3 months follow-up. A statistically significant effect of BI on alcohol frequency was also found for individuals with below high school level of education. Apart from these, no statistically significant sub-group effect at any follow-up point or for any outcome was reported.

In the discussion section, the authors noted that “Although the significant BI effects on alcohol use were modest, it is possible that these small effects may be clinically meaningful when evaluated at the population level; therefore, along with others (e.g., Heather, 2012), we suggest researchers consider efforts to examine the population-level effects of BIs in settings where BIs are already widely implemented.”

Tanner-Smith et al., 2021 (12)

This systematic review and meta-analysis aimed at: (i) estimate the overall efficacy of alcohol and other drug brief interventions (BIs) in general medical (GM) settings; (ii) determine whether outcome domain, study methodology (comparator type, reporting quality, and risk of bias), intervention features (targeting alcohol and/or other drug, setting, and duration), and participant characteristics (age, gender, and race/ethnicity composition) were associated with BI efficacy; and (iii) assess study quality and publication bias in this literature. A total of 111 RCTs or cluster RCTs (total n= 62 263 participants) were included in the metanalysis. Nearly all trials used a screened or elevated risk sample. Intervention settings were most often emergency department or community healthcare settings (75 %) and most BIs were delivered in-person (75 %).

Most trials were alcohol-targeted interventions and overall, these BIs were associated with small and statistically significant reductions in alcohol use. Effect estimates for alcohol-targeted BIs varied by intervention features: significant favourable effects were found in other GM settings than emergency department/trauma centers), when BI was delivered in-person, and when BI included a booster session. A smaller number of trials were drug-targeted interventions, and there was no evidence that drug-targeted BIs were significantly improved or worsened patients' substance use or related consequences. These null-effects were generally consistent across settings, participant characteristics and study design characteristics.

In the discussion section the authors noted that "For alcohol-targeted BIs, after synthesizing evidence from 60 studies, results were consistent with prior literature indicating small beneficial reductions in self-reported alcohol use, roughly equivalent to a reduction from 11.6 to 10.7 drinking days per month. [….] These small effects of alcohol BIs may not be clinically meaningful at the individual level given that similar future trials are expected to yield effects no larger than 0.25 SD reductions for alcohol use; however, these small effects may still be clinically meaningful at the population level."

Imtiaz et al., 2020 (13)

This systematic review and meta-analysis assessed the efficacy of brief interventions (BIs) for cannabis use. 9 randomised trials were included (total reported n=2 873). Participants were recruited from health care settings and reported cannabis use at baseline. Participants were young people (mainly teenagers or undergraduate students) (4 studies), or only adults (4 studies) or mainly adults (1 study). BIs were delivered on-site, were no longer than 2 sessions (max 60 minutes total intervention time) and addressing cannabis use. Interventions were based on motivational interviewing (MI) (8 studies) or personalized feedback only (1 study). Control conditions were no intervention or inactive intervention (e.g. written information, resource list, delayed intervention, general health feedback). Outcomes were cannabis specific (e.g. frequency of use, ASSIST score). Follow-up length varied across studies from 1 month to 12 months, most studies reported on two or three follow-up time points.

Overall, meta-analysis did not demonstrate efficacy of BI for cannabis use. One study demonstrated favourable effect of BI, although only for 2 out of 4 study sites (jurisdictions). The authors concluded that "Brief interventions were found not to be efficacious for improving cannabis-specific ASSIST scores and number of days of cannabis use in healthcare settings."

Consistency in ISDUP/EUPC statements on efficacy and the referenced literature

In ISDUP, brief intervention is described as follows:

> *"Brief interventions consist of one-to-one counselling sessions that can include follow-up sessions or additional information to take home. They can be delivered by a variety of trained health and social workers to people who might be at risk because of their substance use but who would not necessarily seek treatment. The sessions first identify whether there is a substance use problem and provide immediate appropriate basic counselling and/or referral for additional treatment. The sessions are structured and typically last from 5 to 15 minutes.*
>
> *Brief interventions are typically delivered in the primary health-care system or in emergency rooms, but they have also been found to be effective when delivered as part of school-based and workplace programmes, and when delivered online or via computers.*
>
> *Brief intervention sessions typically employ motivational interviewing techniques, which is a psychosocial intervention in which a person's substance use is discussed and the patient is supported in making decisions and setting goals with respect to his or her substance use. In this case, the brief intervention is normally delivered over the course of up to four sessions that can be up to one hour long, but usually consist of sessions of a shorter duration."*

Thus, the description mainly fits the description of brief interventions (BIs) delivered to people assessed as being at-risk of substance use problems and delivered in health care, an approach which is related to the Screening and Brief Intervention and Referral to Treatment (SBIRT) model. The addition that BIs *"… have also been found to be effective when delivered as part of school-based and workplace programmes, and when delivered online or via computers."* suggests that BIs – in principle – could be many different things, varying across different target populations, different interventions regarding content and delivery mode, and different contexts/settings and hence different actors and stakeholders. However, in order to simplify the following assessment, 'brief intervention' is here understood as follows:

The intervention is brief (in terms of number and duration of sessions) and is delivered in health care and the target population is those assessed at risk of substance use problems. The latter implies that a screening procedure or the like precedes – and is a necessary part of – the intervention. This understanding fits WHO's recommendation in ISDUP, 2nd edition:

"WHO recommends screening and brief interventions for hazardous and harmful alcohol use in nonspecialist health-care settings, except in areas of low prevalence of alcohol use where the screening of all patients may not be cost-effective but brief interventions can still be appropriate for identified drinkers. Screening for hazardous and harmful alcohol use should be conducted using a validated instrument that can be easily incorporated into routine clinical practice (e.g., the Alcohol Use Disorders Identification Test (AUDIT) and the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)). In settings in which screening is not feasible or affordable, practitioners should explore the alcohol consumption of their patients when relevant. Patients with a hazardous and harmful alcohol use should receive a brief intervention. The brief intervention should consist of a single session of 5–30 minutes duration, incorporating individualized feedback and advice on reducing or ceasing alcohol consumption, and the offer of follow-up. Patients who on screening are identified as having alcohol dependence should be managed according to the existing WHO recommendations."

The relevant referenced literature in ISDUP on effects of brief interventions targeting at-risk patients in health care comprises 10 systematic reviews, is summarised in Table 1.

Table 1. Overview relevant studies referenced in ISDUP

Author	Primary studies	Population setting	Intervention	Outcome findings
Bertholet	19 RCT	At-risk drinkers primary care	Individual face-to-face or BI motivational intervention, feed-back or advice	Reduced alc cons (8 trials), no effect (7 trials) at 6 and 12 months follow-up
Diestelkamp	7 RCT	12-25 yrs ED after alc. Rel event	BI focused on alcohol	Beneficial effects on alcohol (cons, or harms of referral treatment) (3 trials)
Elzerbi 2015	28 RCT	At-risk drinkers in PHC (20 trials) or in ED (8 trials)	BI, max 4 short sessions to reduce harmful alcohol use	In both PHC and ED, average reduction in consumption at 6 and 12 months f-u
Elzerbi 2017	23 RCT	At-risk drinkers in ED, injured patients (9 trials) and non-injured (14 trials	Alcohol brief intervention, max 4 sessions, incl face-to-face, SMS, telephone, information workbook	Reduced alc cons. at short (< 5 mths) and 1 yr f-u among non-injured. Reduced alc cons at 6 mths f-u only among injured patients.
Kaner	29 RCT	At-risk drinkers in GP (24 trials) and in ED (5 trials)	BI max 5 sessions, incl: MI, CBT, leaflets, drinking diaries, personalised feed-back, etc.	Most trials reported sign beneficial effect on alc cons. Sub-groups: sign effect only among men
Landy 2016	31 controlled trials (17 high rigor)	Mainly adult at-risk drinkers in ED	BI = single session, 5 – 30 minutes, aimed at reducing alcohol consumption	Among high rigor trials: reduced alc cons at 6 mth f-u in 3/6, at 12 mths f-u in 4/11
McGinnes	12 RCT + 1 QRT	Alc rel injury patients in ED	Ultra-brief interventions: in person, computer/phone based, pamphlet	6 trials found sign effect on alc cons at 3 mths f-u, smaller effect at 12 mths f-u
Merz	4 RCT	18-24 yrs in ED w/alc intox	MI. or personalised feed-back, or educational brochure	3 trials found beneficial effect on at least 1 outcome (alcohol use or related problem)
Newton	9 RCT	Up to 21 yrs in ED, visits related to alc or drug use	Mainly MI in-person aimed at reducing harmful alc or drug use	Among 50 effect estimates for various outcomes and f-u, many tended to favour BI but most were n.s.
Young	5 RCT	At risk drug users in health care	MI sessions (mainly w/follow-up) aiming at reducing drug use, SBIRT model	Many effect estimates across various outcomes and f-u, mainly n.s.

ISDUP 2nd edition states under the heading Available evidence:

> "*Forty-eight reviews reported findings for this intervention, 38 of which from the new overview. With regard to primary outcomes, these studies show that brief interventions and motivational interviewing may significantly reduce substance use. This evidence of effect was found regarding different substances (tobacco, alcohol and drugs) and different age groups (adolescents and adults), with effect sizes reported to be small and not to persist beyond 6–12 months*."

Among the 48 reviews referenced for brief interventions in ISDUP 2nd edition, 10 systematic reviews (1-10) pertained to brief interventions in primary health care or in emergency rooms. All these 10 reviews were systematic reviews and included only randomised controlled trials (RCTs). Motivational interviewing is frequently used in brief interventions in health care but is also used as a method in treatment over longer periods of time for people with substance used disorder. Thus, the statement above can be interpreted in two ways: i) brief interventions of various kinds and motivational interviewing in various kinds of preventive or therapeutic interventions may both be effective, and ii) brief interventions when delivered by using motivational interviewing may be effective.

From these 10 reviews, there is good evidence from 7 reviews (1-7) that brief interventions conducted in health care may reduce substance use. However, these 7 reviews all pertain to effects of brief interventions on alcohol consumption, targeting at-risk populations. Two of the 10 reviews assessed evidence of effects of brief interventions on drug use (9, 10) and neither of these provided good evidence for effectiveness in this regard. Thus, the referenced evidence supports a statement that brief interventions in health care may reduce alcohol consumption among at-risk drinkers but does not support an inference of the statement that the intervention may reduce substance use other than alcohol use.

Six reviews (1, 3-7) included studies with participants of various age groups and mainly adults, but none of these conducted sub-group analyses by age group. Three reviews assessed effects of brief interventions in target populations of young people (2, 8, 9) and two of these (2, 8) reported some beneficial effects of brief intervention on alcohol consumption. Thus, the statement that evidence of effect was found for different age groups (adolescents and adults) is repeated at the end of the section on available evidence (i.e. *"Brief interventions and motivational interviewing benefit both adolescents and adults alike.")* and can be supported with regard to effect on alcohol consumption by the evidence pertaining to young people specifically (2, 8) and evidence mainly pertaining to the adult population (1, 3-7).

Effect sizes on alcohol consumption are reported in meta-analyses in 4 reviews (1, 3-5) and the reduction in alcohol consumption was in the magnitude of 20 to 40 grams alcohol/week. For many at-risk drinkers, a reduction of this magnitude may be considered small. The vast majority of primary studies in the 10 reviews reported follow-up time points only up to 12 months, and few trials had follow-up time points beyond this. Thus, there is – in the referenced literature – little evidence on whether or not the intervention effect persists beyond 12 months. A more precise statement is found at the very end of the section on available evidence: *"However, the long-term impact on reducing alcohol use was less clear."*

> "*The reduction of excessive alcohol consumption among people with psychotic disorders was also reported*."

This ISDUP statement was considered not relevant in the present context and neither of the 10 referenced reviews of relevance pertained to this statement.

> "*Indications of reduction in consumption of alcohol and/or harmful patterns of use were also reported both for youth out of college and in college*.»

This ISDUP statement was considered not relevant in the present context and neither of the 10 referenced reviews of relevance pertained to this statement.

> "*Within the school-based setting, one study concluded that there was limited quality evidence demonstrating that brief school-based interventions were more effective in reducing substance use (tobacco, alcohol, drugs) than the assessment-only condition, and were similar to information provision. Other studies reported some effectiveness with regard to cannabis use and similar results with regard to tobacco and alcohol.*"

This ISDUP statement was considered not relevant in the present context and neither of the 10 referenced studies of relevance pertained to this statement.

> "*It was reported that computer-based and Internet-based delivery had small effects that were not sustained in the long term (beyond 12 months) for alcohol, with less evidence available with regard to interventions targeting tobacco and cannabis use. One review reported the effectiveness of interventions delivered by telephone. Effect sizes were higher for interventions delivered face-to-face.*"

This ISDUP statement was on the most part considered not relevant in the present context and neither of the 10 referenced reviews of relevance pertained to computer-based, internet-based or telephone-based interventions specifically. The latter part of the statement suggests that delivery mode moderates the intervention effect and that effect sizes were larger when the intervention was delivered face-to-face as compared to other delivery modes (e.g. internet, telephone). None of the 10 referenced reviews of relevance examined whether delivery mode moderates the effect size. However, a meta-analysis by Carey and colleagues (14) reported higher effect sizes when the brief intervention was delivered face-to-face as compared to computer-delivered, but this intervention pertained to students in college or university and thus outside the health sector.

> *"One review studying programme delivery in emergency settings noted that the integration of results was hampered by the heterogeneity of studies on both adolescents and adults, and for alcohol and drugs. Effectiveness was noted, including for females and for patients qualifying for treatment."*

Among the 48 referenced reviews, none seemed to fit this description. There were 6 reviews that reported on effects of brief interventions in emergency department settings (2, 4, 6-9). One of these (9) reported on both alcohol and drug use outcomes (the other 5 on alcohol outcomes only), however, this review (9) included only studies of young people (up to 21 years) and it did not report effectiveness for females or for patients qualifying for treatment. Thus, it is possible or likely that this statement refers to a publication not among the 48 referenced reviews.

> *"However, the interventions focusing on alcohol consumption primarily for adolescents and young adults may have limited evidence on tobacco use."*

There were 3 reviews assessing effects on alcohol consumption for young people (2, 8, 9). These reviews did all focus on brief interventions in emergency rooms targeting young patients with an alcohol-related injury or alcohol intoxication. It seems likely that this target population is of little relevance with regard to tobacco use (i.e. young people admitted to an emergency department after a tobacco-related injury or acute intoxication).

"Evidence for interventions relating to cannabis were reported to be scarce and inconclusive."

Overall, there were two reviews examining effects of brief interventions targeting drug use only or alcohol and drug use (9, 10). Interventions relating to cannabis can be understood in two ways: i) as those targeting cannabis use specifically, or ii) as those targeting other drug use or a broader category of substance use and for which cannabis use is a relevant outcome. Among primary studies in the two reviews that targeted drug use, only 1 study (15) focussed exclusively on cannabis use. Another primary study (16) evaluated effect of brief intervention targeting alcohol use but reported also on cannabis outcomes. In these two studies, brief intervention had a favourable effect on a few cannabis outcomes, and both were assessed as low quality of evidence and high risk of bias in the systematic reviews (9, 10). Thus, the statement is supported by the referenced literature. One additional comment pertains to the possible contradiction or unstated implication of the two statements: i) there is evidence for effect of brief interventions with regard to drugs and ii) evidence for effect interventions relating to cannabis is scarce and inconclusive.

In EUPC, the health sector is not addressed and brief interventions in health care is not described. Nevertheless, Best practice portal includes evidence of effects of brief interventions in health care and this evidence is briefly reviewed in the following. Brief interventions are categorised into various groups and they are given an assessment of the evidence of effectiveness, as follows:

1. <u>Brief intervention to reduce alcohol use ('likely to be beneficial'):</u>

For this intervention, there is reference to a meta-analysis by Schweer-Collins et al., 2023 (11). The meta-analysis focussed on sub-group analysis evaluating whether brief interventions vary in effect for various demographic groups and severity of at-risk substance use. Overall, among a large number of sub-group analyses few estimates of intervention effect were statistically significant. Thus, there is not good consistency between rating of the evidence (likely to be beneficial') and the main findings of the referenced study. Moreover, there seem to be several other studies that are better suited for supporting this rating of evidence (for instance the review by Tanner-Smith et al., described below).

2. <u>Brief intervention to reduce cannabis use in health care ('unknown effectiveness'):</u>

For this intervention, there is reference to a systematic review and meta-analysis by Imtiaz et al., 2020 (13). This review concluded that the meta-analysis did not demonstrate efficacy of brief interventions on cannabis use. Thus, there is good consistency between the study's main findings and the rating of the evidence.

3. <u>Brief intervention in medical settings to reduce use and harms ('unknown effectiveness'):</u>

For this intervention, there is reference to a systematic review and meta-analysis by Tanner-Smith et al., 2021. This review found that after synthesising evidence from 60 primary studies, there was a small beneficial effect of alcohol-targeted interventions on alcohol use. However, for a smaller number of drug-targeted interventions, there were generally consistent null-findings for drug use.

With regard to harms from substance use, 'substance-related consequences' were also an outcome in these analyses, and no statistically significant effects were reported for this outcome. One may argue that for some substance use (illicit drugs) and for substance-related harms, this review may suggest 'unknown effectiveness' of brief intervention. However, the large literature reported in Tanner-Smith et al., demonstrating small favourable effects on alcohol use, does not fit a rating of 'unknown effectiveness'.

Summary and discussion

The description of Brief intervention in International Standards on Drug Use Prevention (ISDUP, 1st and 2nd edition) mainly delineates this strategy to a rather specific intervention in several regards:

i) the target population is "people who might be at risk because of their substance use but who would not necessarily seek treatment"
ii) the interventions "consist of one-to-one counselling sessions that can include follow-up sessions or additional information to take home." The sessions first identify whether there is a substance use problem and provide immediate appropriate basic counselling and/or referral for additional treatment." The sessions are structured and typically last from 5 to 15 minutes." "Brief intervention sessions typically employ motivational interviewing techniques [….]. In this case, the brief intervention is normally delivered over the course of up to four sessions that can be up to one hour long, but usually consist of sessions of a shorter duration."
iii) The intervention context is typically "the primary health-care system or in emergency rooms"
iv) The outcome of interest is "substance use" at a follow-up time point.

Thus, for the most part, this description fits well with the 'Screening and brief intervention and referral to treatment model' (SBIRT) and it also fits well with WHO's recommendation in ISDUP, 2nd ed. However, the description of brief intervention deviates from this model in a half sentence ".. but they [i.e. brief interventions] have also been found to be effective when delivered as part of school-based and workplace programmes, and when delivered online or via computers."

The referenced literature providing the available evidence comprises altogether 48 reviews in the 2nd edition, included 25 reviews on brief interventions conducted outside the health sector, many of these were conducted in colleges/universities. Some reviews focussed on brief interventions targeting heavy drinkers or other populations with severe health problems. While 48 reviews (mainly systematic reviews and most of them including meta-analysis) seem to be a very strong evidence base, the breadth of studies also show that a broad range of quite different interventions subsume to this category. The variation across interventions pertain to target population; content, modes and duration of the intervention; and context and delivery of the intervention. But, as shown in the preceding, only 10 of the 48 referenced studies were of relevance to the SBIRT model type of intervention.

Also among the 10 relevant reviews, the evaluated brief interventions in the primary studies were of several kinds. The target population at risk was identified in various ways; some reviews included studies targeting people in out-patient/primary health care treatment who were not alcohol treatment seekers (e.g. (1)), some specified criteria for hazardous or harmful drinking (e.g. (3), some reviews included studies targeting patients in emergency departments, whether admitted with an alcohol-related or other kind of injury (e.g. (2, 4)) or non-injured patients (4). The intervention varied also

substantially in duration (number of sessions and length of sessions), for instance the review by McGinnes and colleagues (7) examined effectiveness of ultra-brief interventions in emergency departments which comprised face-to-face interactions lasting 10 minutes or less, or any non-face-to-face intervention involving technology. In the review by Kaner and colleagues, the brief intervention could include up to 5 individual sessions (from 1 to 50 minutes) and total intervention time ranged from a mean of 7.5 minutes to 60 minutes.

International Standards on Drug Use Prevention (ISDUP, 1st edition) highlighted 'Brief interventions' as a strategy with an indication of "very good efficacy". Considering the amount of evidence presented in ISDUP 2nd edition in support of efficacy of brief interventions, this assessment is substantiated, although with some reservations. First, in ISDUP, the indication of efficacy combines the strength of the evidence with the achievable outcomes. Second, the majority of referenced reviews did not pertain to screening and brief intervention in the health sector, which is – by and large – the kind of intervention that ISDUP describes, and which is also the intervention that WHO recommends in the same section. Thus, the referenced supporting evidence is not as extensive as could be inferred at first glance. Third, the evidence of efficacy does not pertain to substance use of various kinds, but to alcohol consumption in particular.

Overall, the statements provided in ISDUP regarding efficacy of brief interventions (i.e. screening and brief intervention in health services) are supported by the referenced literature. Most importantly, the referenced evidence supports a statement that brief interventions in health care may reduce alcohol consumption among at-risk drinkers, however, the literature does not support an inference of the statement that the intervention may reduce substance use other than alcohol use. Notably, ISDUP also states that "Evidence for interventions relating to cannabis were reported to be scarce and inconclusive", and thus adds to this nuancing of expected beneficial effects for various substance use outcomes. Moreover, the statement that also young people may benefit from brief interventions in health care, is also supported by referenced evidence.

The European Prevention Curriculum (EUPC) builds by and large on ISDUP, and it is not clear why a prevention measure like screening and brief intervention in health services, for which there is good evidence of efficacy, is not included in EUPC. When searching the evidence sources that accompany EUPC (i.e. Evidence Database and Xchange Prevention Registry), there is nevertheless some references to evidence on efficacy of screening and brief intervention. However, in two out of three cases, EUPC's rating of efficacy did not match the findings in the referenced literature well.

In the second edition of ISDUP, a large number of more recent literature was added, indicating the substantial growth of studies in this area. Another illustration of this growth is the review by O'Donnell and colleagues (17). They systematically searched for and reviewed systematic reviews of brief alcohol interventions in primary health care and found a total of 24 systematic reviews published between 2002 and 2012. Moreover, many of the included reviews in O'Donnell and colleagues review of reviews were not among the referenced studies in ISDUP, which suggests that the literature (pertaining only to screening and brief intervention in health services) is substantially larger than the referenced literature in ISDUP and not necessarily adequately represented in ISDUP.

It should further be noted that the referenced relevant studies in ISDUP were all systematic reviews, mainly of good quality and evaluating efficacy from randomised controlled trials (or in a few cases comparable designs).

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