APPENDIX A. SEARCH STRATEGIES

SEARCH STRATEGIES BY DATABASE

Database: PubMed

Search date: 8/18/14

Set #		Results
1	"Behavior Therapy"[Mesh:NoExp] OR ((behavior[tiab] OR behaviour[tiab]) AND (therapy [tiab] OR therapies[tiab])) OR "Cognitive Therapy"[Mesh] OR ((cognitive[tiab] OR cognition[tiab]) AND (therapy[tiab] OR therapies[tiab])) OR "Psychotherapy, Brief"[Mesh] OR ((brief[tiab] OR short-term[tiab]) AND (psychotherapy[tiab] OR psychotherapies[tiab])) OR "brief counseling"[tiab] OR intervention[tiab] OR interventions[tiab] OR "Health Education"[Mesh]	668012
2	"Alcoholism"[Mesh] OR "Alcohol Drinking"[Mesh] OR ((heavy[tiab] OR hazardous[tiab] OR harmful[tiab] OR excessive[tiab] OR problem[tiab] OR binge[tiab] OR controlled[tiab] OR risky[tiab] OR "at risk"[tiab] OR "at-risk"[tiab] OR use[tiab]) AND drink*[tiab] AND (Alcohol[tiab] OR "Alcoholic Beverages"[Mesh]))	107410
3	"Therapy, Computer-Assisted"[Mesh] OR "Internet"[Mesh] OR "Cellular Phone"[Mesh] OR "Computers"[Mesh] OR "Computer-assisted"[tiab] OR computerized[tiab] OR "low intensity"[tiab] OR internet[tiab] OR web[tiab] OR "social media"[tiab] OR online[tiab] OR computer[tiab] OR computers[tiab] OR electronic[tiab] OR mobile[tiab] OR smartphone[tiab] OR smartphones[tiab] OR tablet[tiab] OR tablets[tiab] OR self-paced[tiab] OR "health buddy"[tiab] OR e-health[tiab] OR ehealth[tiab] OR m-health [tiab] OR mhealth[tiab]	584939
4	#1 AND #2 AND #3	746
5	((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR randomization[tiab] OR randomisation[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab]) NOT (animals[mh] NOT humans[mh]) NOT (Editorial[ptyp] OR Letter[ptyp] OR Case Reports[ptyp] OR Comment[ptyp]))	2446984
6	#4 AND #5; limit to English, 2000 - present	364

Database: Embase

Search date: 8/18/2014

Set #		Results
1	'cognitive therapy'/exp OR 'behavior therapy'/exp OR 'behavior modification'/exp OR 'health education'/exp OR (('psychotherapy'/exp OR psychotherapy:ab,ti OR psychotherapies:ab,ti) AND (brief:ab,ti OR 'short term':ab,ti)) OR ((behavior:ab,ti OR behaviour:ab,ti) AND (therapy:ab,ti OR therapies:ab,ti)) OR ((cognitive:ab,ti OR cognition:ab,ti) AND (therapy:ab,ti OR therapies:ab,ti)) OR 'brief counseling':ab,ti OR intervention:ab,ti OR interventions:ab,ti	932809
2	'alcoholism'/exp OR 'drinking behavior'/exp OR ((heavy:ab,ti OR hazardous:ab,ti OR harmful:ab,ti OR excessive:ab,ti OR problem:ab,ti OR binge:ab,ti OR controlled:ab,ti OR risky:ab,ti OR "at risk":ab,ti OR "at-risk":ab,ti OR use:ab,ti) AND drink*:ab,ti AND (Alcohol:ab,ti OR 'alcoholic beverage'/exp))	147931

Set #		Results
3	'computer assisted therapy'/exp OR 'mobile phone'/exp OR 'Internet'/exp OR 'computer'/exp OR 'Computer assisted':ab,ti OR computerized:ab,ti OR 'low intensity':ab,ti OR internet:ab,ti OR web:ab,ti OR "social media":ab,ti OR online:ab,ti OR computer:ab,ti OR computers:ab,ti OR electronic:ab,ti OR mobile:ab,ti OR smartphone:ab,ti OR smartphones:ab,ti OR tablet:ab,ti OR tablets:ab,ti OR self-paced:ab,ti OR 'health buddy':ab,ti OR e-health:ab,ti OR ehealth:ab,ti OR m-health:ab,ti OR mhealth:ab,ti	1496238
4	#1 AND #2 AND #3	1352
5	('randomized controlled trial'/exp OR 'crossover procedure'/exp OR 'double blind procedure'/exp OR 'single blind procedure'/exp OR random*:ab,ti OR factorial*:ab,ti OR crossover*:ab,ti OR (cross NEAR/1 over*):ab,ti OR placebo*:ab,ti OR (doubl* NEAR/1 blind*):ab,ti OR (singl* NEAR/1 blind*):ab,ti OR assign*:ab,ti OR allocat*:ab,ti OR volunteer*:ab,ti) NOT ('case report'/exp OR 'case study'/exp OR 'editorial'/exp OR 'letter'/exp OR 'note'/exp)	1334623
6	#4 AND #5	435
7	#6 AND [embase]/lim NOT [medline]/lim	153
8	#7, 2000 – present, English	165

Database: PsycINFO

Search date: 8/18/2014

Set #		Results
1	((DE "Behavior Therapy") OR (DE "Cognitive Behavior Therapy")) OR (DE "Cognitive Therapy") OR (DE "Brief Psychotherapy") OR (DE "Health Education") OR TI (((behavior OR behaviour) AND (therapy OR therapies[tiab)) OR ((cognitive OR cognition) AND (therapy OR therapies)) OR ((brief OR short-term) AND (psychotherapy OR psychotherapies)) OR "brief counseling" OR intervention OR interventions) OR AB (((behavior OR behaviour) AND (therapy OR therapies[tiab)) OR ((cognitive OR cognition) AND (therapy OR therapies)) OR ((brief OR short-term) AND (psychotherapy OR psychotherapies)) OR "brief counseling" OR intervention OR interventions)	276210
2	(DE "Alcoholism") OR (DE "Alcohol Drinking Patterns" OR DE "Alcohol Abuse" OR DE "Alcohol Intoxication" OR DE "Social Drinking") OR ((TI (heavy OR hazardous OR harmful OR excessive OR problem OR binge OR controlled OR risky OR "at risk" OR "at-risk" OR use) OR AB (heavy OR hazardous OR harmful OR excessive OR problem OR binge OR controlled OR risky OR "at risk" OR "at-risk" OR use)) AND (TI (drink*) OR AB (drink*)) AND (TI Alcohol OR AB Alcohol OR (DE "Alcoholic Beverages")))	53853

Set #		Results
3	(((DE “Computer Assisted Therapy”) OR (DE “Internet”)) OR (DE “Cellular Phones”)) OR (DE “Computers” OR DE “Analog Computers” OR DE “Computer Games” OR DE “Digital Computers” OR DE “Microcomputers”) OR TI (“Computer-assisted” OR computerized OR “low intensity” OR internet OR web OR “social media” OR online OR computer OR computers OR electronic OR mobile OR smartphone OR smartphones OR tablet OR tablets OR self-paced OR “health buddy” OR e-health OR ehealth OR m-health OR mhealth) OR AB (“Computer-assisted” OR computerized OR “low intensity” OR internet OR web OR “social media” OR online OR computer OR computers OR electronic OR mobile OR smartphone OR smartphones OR tablet OR tablets OR self-paced OR “health buddy” OR e-health OR ehealth OR m-health OR mhealth)	140406
4	S1 AND S2 AND S3	561
5	#4 AND #5; Limiters - Publication Year: 2000-; English; Methodology: TREATMENT OUTCOME/CLINICAL TRIAL	58

Database: The Cochrane Library

Search date: 8/18/2014

Set #		Results
1	MeSH descriptor: [Behavior Therapy] explode all trees OR MeSH descriptor: [Cognitive Therapy] explode all trees OR MeSH descriptor: [Psychotherapy, Brief] explode all trees OR MeSH descriptor: [Health Education] explode all trees OR ((behavior:ab,ti OR behaviour:ab,ti) AND (therapy :ab,ti OR therapies:ab,ti)) OR ((cognitive:ab,ti OR cognition:ab,ti) AND (therapy:ab,ti OR therapies:ab,ti)) OR ((brief:ab,ti OR short-term:ab,ti) AND (psychotherapy:ab,ti OR psychotherapies:ab,ti)) OR “brief counseling”:ab,ti OR intervention:ab,ti OR interventions:ab,ti	83540
2	MeSH descriptor: [Alcoholism] explode all trees OR MeSH descriptor: [Alcohol Drinking] explode all trees OR ((heavy:ab,ti OR hazardous:ab,ti OR harmful:ab,ti OR excessive:ab,ti OR problem:ab,ti OR binge:ab,ti OR controlled:ab,ti OR risky:ab,ti OR “at risk”:ab,ti OR “at-risk”:ab,ti OR use:ab,ti) AND drink*:ab,ti AND (Alcohol:ab,ti OR MeSH descriptor: [Alcoholic Beverages] explode all trees	4523
3	MeSH descriptor: [Therapy, Computer-Assisted] explode all trees OR MeSH descriptor: [Internet] explode all trees OR MeSH descriptor: [Cellular Phone] explode all trees OR MeSH descriptor: [Computers] explode all trees OR “Computer-assisted”:ab,ti OR computerized:ab,ti OR “low intensity”:ab,ti OR internet:ab,ti OR web:ab,ti OR “social media”:ab,ti OR online:ab,ti OR computer:ab,ti OR computers:ab,ti OR electronic:ab,ti OR mobile:ab,ti OR smartphone:ab,ti OR smartphones:ab,ti OR tablet:ab,ti OR tablets:ab,ti OR self-paced:ab,ti OR “health buddy”:ab,ti OR e-health:ab,ti OR ehealth:ab,ti OR m-health :ab,ti OR mhealth:ab,ti	31584
4	#1 AND #2 AND #3 (not limited by date)	197

APPENDIX B. CRITERIA USED IN QUALITY (RISK OF BIAS) ASSESSMENT OF RCTs

General Instructions: Rate each risk of bias item listed below as **Low risk/High risk/Unclear risk** (see Cochrane guidance to inform judgements). Add comments to justify ratings. After considering each of the quality items, give the study an overall rating of "**Low risk**," "**Moderate risk**," or "**High risk**" (see below).

Rating of individual items:

1. **Selection bias:**
   a. **Randomization adequate* (Adequate methods include: random number table, computer-generated randomization, minimization w/o a random element) **Low risk/High risk/ Unclear risk**
   b. **Allocation concealment* (Adequate methods include: pharmacy-controlled randomization, numbered sealed envelopes, central allocation) **Low risk/High risk/Unclear risk**
   c. *Baseline characteristics* (Consider whether there were systematic differences observed in baseline characteristics and prognostic factors between groups, and if important differences were observed, if the analyses controlled for these differences) **Low risk/ High risk/Unclear risk**
2. **Performance bias:**
   a. **Concurrent interventions or unintended exposures:* (Consider concurrent intervention or an unintended exposure [*eg*, crossovers; contamination – some control group gets the intervention] that might bias results) **Low risk/High risk/Unclear risk**
   b. *Protocol variation:* (Consider whether variation from the protocol compromised the conclusions of the study) **Low risk/High risk/Unclear risk**
3. **Detection bias:**
   a. **Subjects Blinded?:* (Consider measures used to blind subjects to treatment assignment and any data presented on effectiveness of these measures) **Low risk/High risk/Unclear risk**
   b. **Outcome assessors blinded (hard outcomes):* (Outcome assessors blind to treatment assignment for "hard outcomes" such as mortality) **Low risk/High risk/Unclear risk**
   c. **Outcome assessors blinded (soft outcomes):* (Outcome assessors blind to treatment assignment for "soft outcomes" such as symptoms) **Low risk/High risk/Unclear risk**
   d. *Measurement bias:* (Reliability and validity of measures used) **Low risk/High risk/ Unclear risk**
4. **Attrition bias:**
   a. **Incomplete outcome data:* (Consider whether incomplete outcome data were adequately addressed, including: systematic differences in attrition between groups [differential

attrition]; overall loss to follow-up [overall attrition]; and whether an "intention-to-treat" [ITT; all eligible patients that were randomized are included in analysis] analysis was performed) (Note – mixed models and survival analyses are in general ITT) **Low risk/ High risk/Unclear risk**

5. **Reporting bias:**

   a. **Selective outcomes reporting:* (Consider whether there is any suggestion of selective outcome reporting (*eg*, systematic differences between planned and reported findings)? **Low risk/High risk/Unclear risk**

*Items contained in Cochrane Risk of Bias Tool

Overall study rating:

Please assign each study an overall quality rating of "Low risk," "High risk," or "Unclear risk" based on the following definitions:

A "**Low risk**" study has the least bias, and results are considered valid. A low risk study uses a valid approach to allocate patients to alternative treatments; has a low dropout rate; and uses appropriate means to prevent bias, measure outcomes, and analyze and report results. [Items 1a and 1c; 2a; 3b and 3c; and 4a are all rated low risk]

A "**Moderate risk**" study is susceptible to some bias but probably not enough to invalidate the results. The study may be missing information, making it difficult to assess limitations and potential problems (unclear risk). As the moderate risk category is broad, studies with this rating vary in their strengths and weaknesses. [Most, but not all of the following items are rated low risk: Items 1a and 1c; 2a; 3b and 3c; and 4a]

A "**High risk**" rating indicates significant bias that may invalidate the results. These studies have serious errors in design, analysis, or reporting; have large amounts of missing information; or have discrepancies in reporting. The results of a high risk study are at least as likely to reflect flaws in the study design as to indicate true differences between the compared interventions. [At least one-half of the individual quality items are rated high risk or unclear risk]

Conflict of interest: (Record but not used as part of Risk of Bias Assessment)

   a. *Was there the absence of potential important conflict of interest?:* The focus here is financial conflict of interest. If no financial conflict of interest (*eg*, if funded by government or foundation and authors do not have financial relationships with drug/ device manufacturer), then answer "Yes." **Yes/No/Unclear**

APPENDIX C. QUALITY OF INCLUDED STUDIES

Study	Individual Quality Assessment Criteria Ratings											Overall Rating	COI Absent?
	1a	1b	1c	2a	2b	3a	3b	3c	3d	4	5		
Barnett, 2007[1]	Low	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	**Low**	Yes
Bischof, 2008[2]	UNCL	Low	Low	Low	Low	High	UNCL	UNCL	Low	Low	Low	**Moderate**	Yes
Boon, 2011[3]	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	UNCL	**Low**	Yes
Cucciare, 2013[4]	Low	UNCL	Low	Low	Low	UNCL	Low	Low	Low	Low	Low	**Low**	No
Cunningham, 2009[5]	Low	UNCL	Low	Low	Low	UNCL	UNCL	UNCL	Low	Low	Low	**Moderate**	Yes
Gustafson, 2014[6]	Low	UNCL	Low	UNCL	Low	High	NA	High	Low	Low	Low	**Moderate**	Yes
Hansen, 2012[7]	Low	Low	Low	Low	Low	UNCL	UNCL	UNCL	UNCL	UNCL	Low	**Moderate**	Yes
Hasin, 2013[8]	Low	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	**Low**	Yes
Helzer, 2008[9]	UNCL	UNCL	High	Low	Low	High	Low	Low	UNCL	Low	Low	**Moderate**	Yes
Hester, 2012[10]	UNCL	UNCL	Low	Low	Low	High	UNCL	UNCL	Low	UNCL	Low	**High**	Yes
Kypri, 2009[11]	Low	Low	UNCL	Low	Low	UNCL	Low	Low	Low	Low	Low	**Low**	Yes
Kypri, 2008[12]	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	**Low**	Yes
Kypri, 2004[13]	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	**Low**	Yes
Monahan, 2013a[14]	Low	UNCL	Low	Low	Low	High	Low	Low	Low	UNCL	UNCL	**Moderate**	Yes
Monahan, 2013b[14]	Low	UNCL	Low	Low	Low	High	Low	Low	Low	UNCL	UNCL	**Moderate**	Yes
Moreira, 2012[15]	Low	Low	Low	Low	Low	Low	Low	Low	Low	High	Low	**Moderate**	Yes
Mundt, 2006[16]	UNCL	UNCL	Low	Low	Low	High	UNCL	High	Low	UNCL	UNCL	**High**	No
Neighbors, 2010[17]	Low	Low	UNCL	UNCL	Low	UNCL	Low	Low	Low	Low	Low	**Moderate**	Yes
Neighbors, 2004[18]	UNCL	High	UNCL	Low	Low	UNCL	Low	Low	Low	Low	Low	**Moderate**	Yes
Neumann, 2006[19]	UNCL	UNCL	Low	UNCL	Low	High	UNCL	UNCL	Low	High	UNCL	**High**	Yes
Riper, 2008[20]	UNCL	UNCL	Low	UNCL	High	High	UNCL	UNCL	Low	High	Low	**High**	Yes
Schulz, 2013[21]	Low	UNCL	Low	Low	Low	High	NA	Low	Low	Low	Low	**Moderate**	Yes
Sinadinovic, 2012[22]	UNCL	UNCL	High	UNCL	High	High	UNCL	UNCL	Low	High	Low	**High**	Yes
Voogt, 2013[23]	Low	UNCL	Low	UNCL	Low	Low	UNCL	UNCL	Low	Low	Low	**Moderate**	Yes
Wallace, 2011[24]	Low	Low	Low	Low	Low	Low	Low	Low	Low	High	Low	**Moderate**	Yes
Walters, 2009[25]	UNCL	UNCL	Low	Low	Low	High	Low	High	Low	Low	Low	**Moderate**	Yes

Abbreviations: COI=(financial) conflict of interest; NA=not applicable; UNCL=unclear

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APPENDIX D. PEER REVIEW COMMENTS/AUTHOR RESPONSES

Reviewer	Comment	Response
Question 1: Are the objectives, scope, and methods for this review clearly described?		
1	Yes. No comments	Acknowledged
2	Yes. Very well done. A few suggestions below related to the methods.	Acknowledged
3	Yes. Excellent description of objectives, scope and methods. I would welcome the chance to have this experienced team involved in SR's for the revision of the VA/DoD CPG on SUD that is scheduled to begin in FY15. No scoping has been initiated and there are existing contracts with Lewin and ECRI that are involved with other CPGs, but perhaps there are opportunities to explore?	Thank you. We will forward this request to the VA ESP Coordinating Center to explore participation in the CPG.
4	Yes. More information could be provided early on about the specific studies selected for review. The report is difficult to read and follow as written. I realize there is probably a format for these reviews, but given there is only a relatively limited number of studies, I would rather see a brief synopsis of the studies first.	The report adheres to the VA ESP standard template. We agree that the length and format of the report draft can make it difficult to follow. In the version of the report that will be disseminated, the main report will be preceded by a brief executive summary that serves as a synopsis for the report.
5	Yes. The objectives, scope, and methods for this review are clearly described. This is a thorough and robust report on the use of e-interventions for alcohol misuse.	Thank you.
5	Table 2. I don't quite understand why pregnant women would have been excluded from the studies you examined. It is a group with potential for alcohol abuse and there are increasingly more women veterans. I'm sure there is a reason, but a rationale would be useful.	E-interventions for alcohol misuse in pregnant women are a worthy topic of research, but we reasoned that the processes and outcomes for pregnant women would be too different from the general population. Nevertheless, we retained information on how many studies were available so additional work could be completed on this topic. We found 16 studies whose abstracts suggested they could be trials focused on pregnant women, but did not conduct full-text reviews to evaluate their inclusion. We revised the discussion to note this limitation of the literature and highlight the need for future research.
6	Yes. The objectives and scope of this review are clearly and concisely described. Detailed description of methods including data abstraction and quality assessment, as well as data synthesis makes process completely transparent.	Acknowledged
Question 2: Is there any indication of bias in our synthesis of the evidence?		
1	No. No comments.	Acknowledged
2	No. No comments.	Acknowledged
3	No. No comments.	Acknowledged
4	No. The report does not appear biased.	Acknowledged
5	No. No comments.	Acknowledged

Reviewer	Comment	Response
6	No. None whatsoever.	Acknowledged
Question 3: Are there any published or unpublished studies that we may have overlooked?		
1	Yes. 1. Screening and Behavioral Counseling Interventions in Primary Care to Reduce Alcohol Misuse: USPSTF Recommendation Statement. Ann Intern Med. 2013; 159(3):210-218. Link: http://www.uspreventiveservicestaskforce.org/uspstf12/alcmisuse/alcmisusefinalrs.htm 2. . Jonas et al Comparative Effectiveness Review: Screening, Behavioral Counseling, and Referral in Primary Care to Reduce Alcohol Misuse. AHRQ. July 2012. Link: http://www.ncbi.nlm.nih.gov/books/NBK99199/	The cited publications were reviewed and are not trials evaluating e-interventions for alcohol misuse. However, these are relevant publications that have been integrated into the background literature review and discussion.
2	No. Not that I am aware of.	Acknowledged
3	Yes. There should be some explicit attention to the omission of the Brief et al trial from the review. Also note that p 20 indicates there would be an update beyond 11/19/13 that should include this study? It was published very close to the search deadline, and perhaps that's why it got missed? I don't find it at clinicaltrials.gov. At least some discussion of the findings is warranted, especially given the sample. **Web intervention for OEF/OIF veterans with problem drinking and PTSD symptoms: a randomized clinical trial.** Brief DJ, Rubin A, Keane TM, Enggasser JL, Roy M, Helmuth E, Hermos J, Lachowicz M, Rybin D, Rosenbloom D. J Consult Clin Psychol. 2013 Oct;81(5):890-900	The study by Brief et al was identified in our updated literature search but was excluded because outcomes were not reported at ≥6 weeks. However, because this study uses a more robust intervention than included studies and was conducted in Veterans, we discuss it briefly in the report's discussion.
3	The SR found no rcts of smartphone applications, but the following was in progress and listed in clinicaltrials.gov at http://www.clinicaltrials.gov/ct2/show/NCT01003119?term=gustafson&rank=9 This is an important study that warrants discussion (e.g., p 53) and perhaps even acknowledgement in the ES that addresses smartphone apps in para 2 p 8. The intervention incorporates many of the features identified in the Discussion (p 53) for future evaluation. Might also add specifically to Table 10 (or use as e.g. for multi-component interventions – p 56 row 1). The smartphone app is under active consideration by the Connected Health Office in VHA and perhaps Kathy Frisbee should be contacted for her input on the status (very preliminary from what I understand) **A smartphone application to support recovery from alcoholism: a randomized clinical trial.** Gustafson DH, McTavish FM, Chih MY, Atwood AK, Johnson RA, Boyle MG, Levy MS, Driscoll H, Chisholm SM, Dillenburg L, Isham A, Shah D. JAMA Psychiatry. 2014 May;71(5):566-72. doi: 10.1001/jamapsychiatry.2013.4642	The study identified from ClinicalTrials.gov has been completed and published (Gustafson, 2014; cited by the reviewer). This study was identified in our updated literature search and is included in the final report.
4	Not to my knowledge as relates specifically to alcohol.	Acknowledged

Reviewer	Comment	Response
5	No. No comments.	Acknowledged
6	Randomized controlled trial of two brief alcohol interventions for OEF/OIF veterans. McDevitt-Murphy, Meghan E.; Murphy, James G.; Williams, Joah L.; Monahan, Christopher J.; Bracken-Minor, Katherine L.; Fields, Jordan A. Journal of Consulting and Clinical Psychology, Vol 82(4), Aug 2014,	The McDevitt-Murphy et al trial is relevant to alcohol research in Veterans, but was excluded because the intervention was face-to-face, as opposed to including an e-intervention, which is the focus of the current review.
6	A Smartphone Application to Support Recovery From Alcoholism: A Randomized Clinical Trial David H. Gustafson, PhD1; Fiona M. McTavish, MS1; Ming-Yuan Chih, PhD1; Amy K. Atwood, PhD1; Roberta A. Johnson, MA, MEd1; Michael G. Boyle, MA1; Michael S. Levy, PhD2; Hilary Driscoll, MA3; Steven M. Chisholm, MA4; Lisa Dillenburg, MSW1; Andrew Isham, MS1; Dhavan Shah, PhD5 JAMA Psychiatry. 2014;71(5):566-572. doi:10.1001/jamapsychiatry.2013.4642	Thank you for noting the trial by Gustafson et al. As indicated above, this was identified in our updated literature search and is included in the final report.
Question 4: Please write additional suggestions or comments below. If applicable, please indicate the page and line numbers from the draft report.		
1	No comments	Acknowledged
2	Thank you for the opportunity to review this report. Drs. Williams and Dedert and their team have done an excellent job synthesizing this literature. I hope that my suggestions and comments will help to improve what is already an outstanding report. **Main comments:** 1. Methods. The authors should provide justification for using odds ratios for dichotomous outcomes, or they should consider using RRs or RDs. Most methodological guidance documents provide rationale that suggests using RRs for most situations similar to what is synthesized in this report. For some situations, risk differences might be appropriate (but rationale for choosing them should be provided). Most methodologists do not think that ORs should be used for this type of analysis.	Thank you for this observation that a RR is a more appropriate summary statistic for a dichotomous outcome. We agree and have substituted a RR in the analyses of the dichotomous outcome “met drinking limits.”

Reviewer	Comment	Response
2	2. Results. Exec Sum pg 4, lines 32-35, and ES pg 5, lines 1-3 (and many other locations in tables and text throughout the report). This comment is about how to describe results of the meta-analyses that were not statistically significant. This issue comes up in several places in the Exec Sum and in the full report. For example, for the MD -29.9 (95% CI, -78.2 to 18.3), many would describe that data simply as finding "no statistically significant difference" or even just "no significant difference". The authors have described it as finding "a small reduction in alcohol consumption, but the 95% CI was wide and included no effect". I think wording it this way is confusing and makes it sound like the authors are more confident that there is truly an effect (and it makes readers wonder why some results are described in this manner, but others were not). I would argue that that data show that there is no significant effect or that the existing data don't provide the power to find anything less than a moderate to large effect. The SOE for that finding was low, indicating that we have low confidence in the effect estimate (i.e., the effect might be anywhere in that very wide CI, and we're not at all confident that it's 29.9).	We have edited the report to provide consistency in how statistically insignificant results are described. We were aiming for a non-technical way to express the results, but have modified the text to use more traditional language and be more consistent in our description of the findings.
2	2. Results (continued). Also, a reduction of 29.9 grams/week is a little more than 2 drinks/week, and many clinicians would not consider that to be a clinically significant reduction, especially considering the average drinks/week that the subjects were consuming at baseline.	Thank you. We agree. In the final report, we have stated: "When evaluating the overall SOE, we considered a difference of 3 standard U.S. drinks/week or an SMD ≥0.4 as clinically significant and defined precise effects as those with 95% confidence intervals (CIs) that excluded smaller effects."
2	2. Results (continued). Further, I have some concern that the estimates of effect are overestimates because they include the studies rated as high risk of bias (and it appears that those studies often found larger estimates of effect)—see my comment #4, and others, below.	Although the value of subgroup analyses by risk of bias ratings is controversial, we conducted sensitivity analyses in the limited instances where there were sufficient studies to support these analyses. These results have been added to the report, but were similar to the original analyses and so did not change the conclusions.
2	2. Results (continued). In other places, the authors have described results of meta-analyses that were not statistically significant simply as "no difference" or similar (which seems more appropriate, given the data). It's not clear why certain instances took the other approach (of describing the finding as a small or modest effect, but with the follow-up line that the CI included no effect).	As indicated above, we have edited the report to provide consistency in how statistically insignificant results are described.
2	3. Methods and Results. This applies to several places, related to interpretation of the data. Many readers will not be familiar with grams/week of alcohol. Since most of the data was for that outcome, it would be helpful to provide readers with some interpretation that allows them to understand the findings in terms of drinks per week—either just giving the conversion in 1 or 2 places (usually it's 13.7 grams = 1 standard drink) or else explaining how many drinks per week it is for the various main findings.	To provide the reader with a more accessible way of interpreting the results, we have added the definition for a U.S. standard drink (including grams of alcohol) to an inset box in the Executive Summary.

Reviewer	Comment	Response
2	4. Methods and Results. The risk of bias ratings seem to be ignored when conducting the quantitative syntheses. The ROB ratings were used to prioritize and interpret findings when conducting qualitative syntheses, appropriately. But, why were they ignored in the quantitative synthesis? I would suggest that more attention should be given to them in the quantitative syntheses. It seems that there are 2 approaches commonly used to do this in the most rigorous meta-analyses—either include all the studies in the main analysis and remove the high ROB studies as a sensitivity analysis (or this can be shown in a single plot that includes an overall pooled estimate and stratifies by high vs. low/mod ROB), or include only low/mod ROB studies in the main analysis and add the high ROB studies as a sensitivity analysis.	Although the value of subgroup analyses by risk of bias ratings is controversial, we conducted sensitivity analyses in the limited instances where there were sufficient studies to support these analyses. These results have been added to the report, but were similar to the original analyses and so did not change the conclusions.
2	5. Discussion. ES pg 8 under Clinical and Policy Implications, Lines 4-5. And pg 9 under Conclusions (and similar material in several places in the full report). Regarding claims about small positive effects and short-term benefits. I'm not convinced that the review found "positive effects of e-interventions on alcohol consumption over the short-term". This is perhaps related to my comment #2 above, and how to interpret the data. Looking at the meta-analyses, there were no statistically significant findings for consumption outcomes. Further, those estimates include the studies rated as high risk of bias that appear to have higher estimates of effect than studies with low/mod ROB.	Thank you for identifying this point of confusion. Our review did not examine short-term outcomes, and the places in the report in which we discuss short-term outcomes are references to prior work. We have rephrased these statements to prevent confusion about our findings. The revised report more clearly indicates our findings of absent or modest effects, which are contrasted with some previous evidence of small benefits of brief alcohol interventions.
2	6. Discussion. ES pg 8 under Clinical and Policy Implications. Lines 7-8. (and similar material in the full report). It is great to see this part about more intensive interventions, and the possibility that more intense e-interventions might be effective. I think this is a key issue, and maybe it deserves even more attention. It has been shown that very brief single contact face-to-face interventions are typically not effective. So, it is not surprising that single session, brief e-interventions are not effective. It's nice to have some qualitative approach for assessing differences in effect by intensity, but it seems possible to also conduct quantitative analyses to address this issue—at a minimum, the authors could stratify meta-analyses by intensity or just add columns to the forest plots so that readers can quickly align/see various intensities and the associated effects (right now, the report requires readers to look back and forth at many places to piece it all together when looking at the forest plots).	While the limited number of trials on the topic of e-interventions for alcohol prevented us from conducting more quantitative analyses, we agree that the qualitative relationships are difficult to follow in this extensive report. To facilitate comprehension of this important issue, we have inserted information on the risk of bias, level of supplemental human support, and intervention dose (single vs multiple sessions) into the figures. We have also added a brief discussion of a study (Brief, 2013) of a more intensive intervention in Veterans with alcohol misuse to the report's Discussion. This study was not included in the Results section because outcomes were not reported at ≥6 months.
2	7. Forest plots. Related to issues raised in my previous comments: throughout the report, it would help to have a few more columns added to the plots. Specifically, showing the following for each study: risk of bias, level (1, 2, or 3), and whether the intervention was a single contact or multiple contacts.	See response to immediately preceding comment.

Reviewer	Comment	Response
2	8. Table 1. Pg 11. a. Suggest indicating somehow that "unhealthy alcohol use" is synonymous with alcohol misuse because it shows up in the literature a lot and sometimes people are confused about how those terms compare. b. Suggest adding "alcohol use disorder" to the Table and perhaps adding some information to the left column to indicate DSM IV (alcohol abuse and alcohol dependence) or DSM-5 (AUD) under the terms associated with the different versions of DSM. c. For risky or hazardous use, there are also per occasion amounts (as well as weekly) – they are typically 4 or more per occasion for adult women and anyone older than 65 years, and 5 or for younger men. d. Table 1 footnote. Related to the DSM-IV part of the footnote. Only alcohol abuse and alcohol dependence are DSM-IV terms. Risky or hazardous use terms were developed from other sources (mainly through the prevention literature). Harmful use is an ICD-10 term.	This table has been modified in several places to add the suggested information.
2	9. Heterogeneity. The authors could perhaps do more to explore and explain heterogeneity. Stratifying forest plots by risk of bias might provide/show an explanation for it in some of the plots. For example, when looking at Figure 3 (I squared was 62%), I would bet that the heterogeneity among the low/mod ROB studies was 0% and that the high ROB studies (really it's just 1 of them, Riper) account for the statistical heterogeneity. I didn't try to look into this level of detail for all of the meta-analyses, but I wonder if the issue is similar in the other analyses with moderate or high statistical heterogeneity.	Thank you for the suggestion. We have reformatted the forest plots to show risk of bias. Where feasible, we have conducted and reported results from sensitivity analyses that exclude studies at high risk of bias.
2	10. pg 31. Figure 3. It is interesting that only the 2 studies rated high ROB (Neumann and Riper) found a statistically significant effect (within the study). Reading the report, it was not so easy to piece that information together, as I had to look back and forth between the Appendices and the Figure. Those were also the only 2 "level 2" studies in that forest plot. So, it may not be so simple as to say that we have the (common) situation of high ROB studies overestimating effects, because the levels (and maybe other things) also differ. Regardless, it would be helpful to show more columns within the plot so that readers don't have to look back and forth at so many places, by indicating the ROB, the Level, and whether they were a single or multi-contact intervention within the Figure.	We have added information to the figures to draw attention to key variables and allow readers to more easily examine qualitative patterns in the data.
2	11. pg 41. Line 37. Says that evidence is insufficient…There seems to be a discrepancy with the SOE table (Table 7) – it has low SOE for alcohol consumption outcomes. I didn't cross-check other places in the report to see whether they matched the text here or the SOE table.	We have verified that the "insufficient" rating was correct and have updated the SOE table to match the table.

Reviewer	Comment	Response
2	12. pg 46. Lines 36-37. I think this is the first mention of the thresholds used to determine precision, and they're only mentioned here for KQ 4. Suggest that these should be in the Methods section also (especially if they also apply to other KQs). The thresholds used for other outcomes should also be reported.	We have added this information to the "Data Synthesis" section so that readers could consider the threshold for precision while reading the results.
2	13. Table 9. The SOE table. a. Suggest separating the SOE grades for adults and students. It doesn't seem to make sense to combine the SOE grades for those 2 groups when all of the evidence was separated for those populations throughout the report. Further, I see some rows where it seems that some domain ratings should perhaps differ for the adult data and the student data -- e.g., I wonder if the authors would keep the same ratings for aggregate risk of bias and for precision in some of these rows if they separated SOE grades for adults and students. b. Transparency of the SOE grades could be improved. GRADE recommends providing footnotes to make the rationale clear, when needed. For example, for adults, for meeting limits, there were 3 RCTs, and 2 of those 3 were rated high ROB. Yet, aggregate ROB was rated as low in the SOE table. I would suggest that the authors provide some rationale for this rating. Another example, for many of the rows the thresholds for when the evidence was precise or imprecise is unclear. Another example, the entry "some indirectness" is used in a couple of places, and some rationale for what that means and how it was factored into the overall grade would help with transparency of the SOE grades.	We understand the concern and have given separate SOE ratings when ratings diverged importantly for adult and student populations. We kept detailed records of the SOE ratings but do not think most readers will want this detail. Cochrane readers have specifically described excessive footnotes as a barrier to understanding. Our overall judgment about the risk of bias is not based on a simple count of studies but is informed by contribution of low risk of bias studies to the summary estimate (study weights). In the example cited, low risk of bias studies contributed 64% of the study weight to the summary estimate.
2	14. pg 54. Limitations. Lines 17-19. Regarding judgment not to conduct subgroup analyses, and specifying the need for 4 studies per group. I think this is the first time this shows up in the report. If this was an a priori decision, it should be described in the Methods section. More importantly, the authors should provide rationale for this decision, with references supporting its validity.	We have added this criterion to the Methods section under "Data Synthesis and Analysis," along with a reference to: Fu R, Gartlehner G, Grant M, et al. Conducting Quantitative Synthesis When Comparing Medical Interventions: AHRQ and the Effective Health Care Program. In: Agency for Healthcare Research and Quality. Methods Guide for Comparative Effectiveness Reviews [posted October 2010]. Rockville, MD. Available at: http://effectivehealthcare.ahrq.gov/.

Reviewer	Comment	Response
2	**Minor comments:** 1. page 2 of Exec Sum. Lines 2-4 (and maybe also in later parts of the report that invoke the PRISMA statement). I think the PRISMA standards are not quite described/invoked appropriately. PRISMA only provides preferred reporting standards (telling us what should be reported in systematic reviews and meta-analyses), it does not provide methodological guidance for how to actually conduct systematic reviews. So, reviews are not actually "conducted" according to PRISMA standards; rather, they are reported according to PRISMA standards—and other methodological manuals or publications guide how reviews are conducted (such as the EPC methods manual that the authors reference in other places). 2. pg 4 of Exec Sum. Line 5. Delete only 3. pg 4 of Exec Sum. Lines 6, 13, and 19-21. It would help to provide the n after "Most". 4. pg 4 of Exec Sum. Line 16. It might help to describe/define PNF here. 5. pg 6 of Exec Sum. Line 12. End the sentence after "misuse". Start next sentence with "They varied…" (deleting ", but"). 6. pg 7 of Exec Sum. Line 7. This bullet about SOE for KQ 4 was not included for the earlier KQs. For consistency, either delete it here or include bullets/info about SOE for the other/earlier KQs also.	Most of the suggested edits have been made as suggested. We did not add the "n's" after "most" (comment 3 at left), as the intention for the Executive Summary is to provide a high-level summary without all the details contained in the main report.
2	7. pg 7 of ES. Line 14. "midlife" is unclear. Suggest providing mean age that is intended or similar. .	We clarified "midlife" by adding the median age.
2	8. pg 7-8 of ES. Table ES-1. Related to main comment #2. For the first 3 rows, why not just put in "No statistically significant difference" and then the data in parentheses in the "Effect Estimate" column? Same for the 3rd row up from the bottom that has "small, statistically insignificant difference". (The Table seems to be inconsistent across outcomes for how/when to determine that there was "no difference" vs. saying something about a small difference that was not statistically significant)	We were attempting to enhance clarity through a less technical presentation. We have modified the presentation to use clearer language when summarizing results qualitatively, and to include 95% CIs for outcomes with summary effect estimates.
2	9. pg 9 of ES. Line 17. It might help to describe what the only VA study found here in the Executive Summary, given the audience	We describe that only a single study was conducted in a VA population and that this affects applicability. We did not think that emphasizing the results from this one trial (given 26 trials overall) would be informative.
2	10. page 12. Line 26. Add "s" to adverse effect	Thank you. We have edited as suggested.

Reviewer	Comment	Response
2	11. pg 15. Table 2. Publications, last row. "Western Europe" is an unclear region that has evolved in the fairly recent past. Also, it is unclear if the intention here was to consider Europe as having 4 regions (western, eastern, northern, southern) or as having 2 regions (just eastern and western). Both geographic divisions are used in various places. The former approach would lead to the exclusion of studies from Sweden and Italy, for example. There is not general agreement about which countries to consider as western, eastern, northern, and southern Europe. I'm not disagreeing with limiting the eligibility as the authors have, but the specific eligible countries should be listed. Also, the issue of which country the studies were conducted in seems more appropriately listed in the Setting row, rather than the Publications row of Table 2.	"Western Europe" refers to Countries of the European Union. We have modified the text to clarify this.
2	12. pg 21. Figure 1. The typical flow diagram recommended by PRISMA specifies (at the bottom of the figure) both the total number included for any evaluation (which you have) and the number included in quantitative analyses (which is missing)	Thank you for the suggestion. In general, we agree with this approach, but in this specific instance we have not included the number included in quantitative syntheses, since the number varied widely by outcome and population.
2	13. pg 27. Figure 2. This may show up OK on a computer screen, but I can't tell the difference between the 2 colors used in the bar graph when printing the document in black and white. Consider using a larger contrast between the 2 colors.	We have changed the color contrast in this figure and also made one category diagonally striped rather than solid.
2	14. pg 32. Lines 11 and 13. Why did it drop from 4 to 3 studies?	This inconsistency has been corrected.
2	15. Several of the Figures include Kypri 2008 (as well as a Kypri 2009 study). The ROB appendix has 2 Kypri 2009 studies, but no Kypri 2008 study.	There are 3 Kypri studies (2004, 2008, and 2009). We have carefully reviewed the report, the risk of bias table, and the appendices. All 3 Kypri studies are referenced correctly.
2	16. p 49. Table 9. The row for Alcohol Social Problems, Effect estimate column. I think a negative sign is missing for the 95% CI for the SMD data.	Thank you. The negative sign has been added.
2	17. p 50. Table 9. For KQ 4. Effect estimate of 50 to 80g/wk. What was the CI? If not available, a footnote explaining the data more would help	There was no summary estimate for this outcome. The range of effects is presented. We have modified the text to clarify that this is a range.
2	18. pg 51. Lines 28-29. The way the 1st and 2nd sentences are worded, it sounds like the 2nd sentence will be about "other" outcomes (i.e., non-alcohol consumption outcomes). But, then the 2nd sentence starts with a point about binge drinking, which is an alcohol consumption outcome.	This sentence was edited for clarity. The intent was to convey that the most data are available for the volume of alcohol consumed, while other outcomes were reported in comparatively fewer studies, including those outcomes we targeted in the review (*eg*, binge drinking episodes).
2	19. pg 54. Line 34. Delete the underscore after ClinicalTrials.gov	Thank you. We have edited as suggested.

Reviewer	Comment	Response
2	20. Methods. Risk of bias. The official documents referenced by the authors use low, medium (not moderate), and high ROB ratings. Moderate is used in grading the SOE, but medium is used when rating ROB. I'm not sure why high and low were the same in both systems, but the middle categories differed (and I'm not sure that it really matters enough to change it throughout the report)	Acknowledged
3	I appreciated attention to clinically meaningful change vs. statistically reliable change elsewhere in the document, but might add a comment to TABLE ES-1. Might also indicate the threshold set for a "precise estimate of effect" from p 46 line 37.	We have added detail to our definition of clinically significant effects and precise effects to the Executive Summary Methods section.
3	Throughout the document, assure accurate distinction of AUDIT-C > 8 from AUDIT-C >=8 (e.g., p 55 line 15 that is accurate; elsewhere there is sometimes mention of AUDIT-C >8)	The change from AUDIT-C>8 to AUDIT-C $\geq$8 has been made throughout the document.
3	P 11 para 1 last sent – reference 14 for personal communication misspells source	Thank you. This has been corrected.
3	P 14 Table 2 last row – may be worth mentioning the number of trials excluded based solely on n<50, however the rationale for design decision is persuasive.	We did not track the number of trials excluded due to n<50.
3	P 28 last sent – the potential for selective reporting is well taken in this literature. I encourage some statement about the importance of trial registration and analyses consistent with original analytic plan. Also curious what percent of selected trials appeared in clinicaltrials.gov	We have added a statement supporting trials registries in the Future Research section. Although we searched ClinicalTrials.gov for completed but unpublished studies, we did not evaluate whether published trials had been included in ClinicalTrials.gov.
3	Table 9 data row 1 – convert g/week to standard US drinks/week, consistent with TableES-1	We retained the g/week units in this table so that it would correspond directly to the forest plots. We have added a footnote that gives the grams of alcohol in 1 standard U.S drink and we describe the results in the text using the number of standard U.S. drinks.
4	I agree with the overall conclusions drawn, but the organization of the report makes it cumbersome to follow as noted above. It's unclear why all the studies related to college students are included or relevant to veterans. Their inclusion does make it more comprehensive, but a shorter report of more direct relevance to veterans may be preferable in this context.	Studies conducted in college populations were included after discussion with our stakeholders and technical expert panel. Although these studies were considered less applicable to Veterans, they form a large proportion of the extant literature, and our study team thought these studies could contribute to a better understanding of the e-intervention effects.

Reviewer	Comment	Response
5	1. Background: The Pew Foundation's January 2014 report states that 87% of American adults ages 18 and older use the internet: http://www.pewinternet.org/fact-sheets/health-fact-sheet/ Your source says 79%. But Pew is cited often, is well-respected, and it helps strengthen the argument to potentially use e-interventions and to fund research in the future	Thank you for this suggestion. We have updated the description and citation as recommended.
5	2. Please define IVR for the reader in the background instead of waiting to the results.	We now define the "IVR" abbreviation earlier in the report and provide an explanation of how it differs from other e-interventions.
5	3. Data abstraction: The word ethanol is all of a sudden used in the data abstraction but nowhere else. Through the rest of the paper the word alcohol is used.	Thank you. "Ethanol" has been replaced with "alcohol."
5	4. Summary and Discussion: Because this is a VA report, readers will likely want to know how many trials were conducted in VA samples. While you provide this information it is buried. I would put this more towards the beginning of your summary and discussion perhaps in the second paragraph where you first mention that "Studies were equally divided between college students and other groups of adults."	Thank you for the suggestion. This detail has been added the Results sections of the Executive Summary and main report.
6	Separate analyses and reporting for college students and adults was very helpful.	Thank you.
6	P. 27 Figure 2. Strategies Used in E-Interventions – increase contrast between bars in graph.	The figure has been revised to increase the contrast.
6	It would be helpful to know more about the source of the normative data used to generate PNF in each study, given that it is the modal intervention- i.e. is normative feedback based on a sample of other college students at the same university, a representative national sample, such as NHSDUH, or some other data set.	The comparison sample has been further described in KQ 1.
6	KQ2 Key points (p.28) and summary of findings (p.38) focus on low strength of evidence supporting longer-term (>6 mo) benefits of e-Interventions in adults, and conclude that available data on long-term effects is modest or absent. It appears that the strength of evidence for short-term effects seems is similarly low (Fig 3, page 31). If that is the case, key points and summary should reference lack of both short and long-term benefit.	Our review included only studies that reported outcomes at ≥6 months. Therefore, our SOE ratings are limited to these outcomes. However, in the Discussion, we discuss other reviews that include trials with shorter duration outcomes.
6	What general conclusions (if any) can be drawn by comparing the studies conducted with adult and student samples (e.g. comparing Figures 3 and 6)? Is it accurate to say that there is a higher strength of evidence for certain short-term effects of e-interventions in college students? P.52 lines 24-25 seems to support this conclusion.	We assessed the SOE for student and adult populations separately. We have updated the SOE ratings for alcohol-related social problems showing low SOE in adults and moderate SOE in students.

Reviewer	Comment	Response
6	p. 42, lines 18-25. It would seem that combining e-interventions with BMI could actually be iatrogenic, at least in the college student population, with regard to binge drinking outcomes. Does the last bullet need to be strengthened to reflect his finding – i.e. not only do these interventions not have a benefit, but they may be harmful?	The single study in college students of combined e-intervention plus BMI did not show any difference from the e-intervention alone. Our bullet accurately summarizes this finding. BMI compared directly to e-interventions alone resulted in greater reduction in alcohol consumption, and this is reflected in the bullet summarizing this finding.
6	Clinical and Policy Implications section provides thoughtful synthesis and helpful recommendations. Hopefully this report will help move the field beyond its focus on single session PNF interventions, to developing and evaluating more robust, intensive interventions that draw upon evidence-based psychotherapies, and perhaps focus on relapse prevention.	Thank you.
Question 5: Are there any clinical performance measures, programs, quality improvement measures, patient care services, or conferences that will be directly affected by this report? If so, please provide detail.		
1	HPDP Staff, including Health Behavior Coordinators, HPDP Program Managers, and Veterans Health Education Coordinators will all benefit from this information. NCP staff will appreciate the thorough review and thoughtful recommendations, which will help inform guidance in the Limit Alcohol Healthy Living message materials, the Veterans Health Library, and, potentially, the Healthy Living Assessment. It certainly suggests the need to support additional research on more robust e-interventions. Additional counseling pairing or comparison intervention might include Telephone Lifestyle Coaching.	Thank you. We will forward the recommendation for target audiences to the ESP coordinating center and the CIDER dissemination center.
2	No comments	Acknowledged
3	There is potential applicability to newly established Joint Commission ORYX measures on SUB. They rely on documentation that could be informed by e-interventions; however the metrics are focused in inpatients plus some follow-up after discharge. As noted PCS is considering adaptation of the Gustafson et al ACHESS smartphone app for VHA use.	Acknowledged
4	No comments.	Acknowledged
5	No comments.	Acknowledged
6	Findings are highly relevant to VHA Mental Health Services, including the MIRECCs, and the National Center for PTSD. Also relevant to VA HSR&D research audience, particularly the Mental Health QUERI.	Thank you. We will forward the recommendation for target audiences to the ESP coordinating center and the CIDER dissemination center.
Question 6: Please provide any recommendations on how this report can be revised to more directly address or assist implementation needs.		
1	No comments.	Acknowledged
2	No comments.	Acknowledged

Reviewer	Comment	Response
3	Given the findings, implementation of reviewed interventions is premature and the report seems appropriately cautious.	Thank you.
4	It would seem inappropriate to recommend implementation of these approaches given the modest findings of their efficacy. The report adequately addresses these concerns.	Acknowledged
5	No comments.	Acknowledged
6	None.	Acknowledged
Question 7: Please provide us with contact details of any additional individuals/stakeholders who should be made aware of this report.		
1	OMHS leadership (Harold Kudler, Lisa Kearney, Andy Pomerantz…), CIH Executive Director, Steve Maisto (sto.Maisto@va.gov), Dave Oslin (Dave.Oslin@va.gov)	Thank you. We will forward the recommendation for target audiences to the ESP coordinating center and the CIDER dissemination center.
2	No comments	Acknowledged
3	Kathy Frisbee in Connected Health	Thank you. We will forward the recommendation for target audiences to the ESP coordinating center and the CIDER dissemination center.
4	No comments.	Acknowledged
5	I would recommend sending this report to the National Institute on Drug Abuse (NIDA) since they fund research on substance abuse in military life and this report will also be useful for non-VA populations as well.	Thank you. We will forward the recommendation for target audiences to the ESP coordinating center and the CIDER dissemination center.
6	None.	Acknowledged

APPENDIX E. STUDY CHARACTERISTICS

Study; **No. of participants randomized;** **No. of treatment arms**	**Intervention Type**	**Control Type**	**Age (Mean [SD]); % Female; % White**	**Location; Setting; VA? (Yes/No)**	**Education (by Category or Mean Years [SD])**	**Baseline Alcohol Intake (g/wk)**	**Baseline Alcohol Score (Instrument)**
Barnett, 2007[1] 225 2	Electronic intervention (e-Intv)	Face-to-face	18.8 (0.9) 51 76	USA University No	Total population: ≥college: 100%	92.15	NR
Bischof, 2008[2] 408 3	e-Intv + phone (full) e-Intv + phone (stepped)	Waitlist (WL)	36.5 (13.5) 32 NR	Europe NR No	Mean years(SD): e-Intv (full): 10.3 (2.7) e-Intv (stepped): 10.4 (2.7) WL: 10.4(2.1)	253.90	NR
Boon, 2011[3] 450 2	e-Intv	Information control (IC)	40.5 (15.2) 0 NR	Europe Web access No	e-Intv: <college: 46.1% ≥college: 53.9% IC: <college: 47.7% ≥college: 52.3%	312.91	NR
Cucciare, 2013[4] 167 2	e-Intv	Treatment as usual (TAU)	59.3 (15.0) 12 69	USA Clinic Yes	NR	336.11	AUDIT-C Overall: 6.4 (2.50) e-Intv : 6.3 (2.5) TAU :6.5 (2.5)
Cunningham, 2009[5] 185 2	e-Intv	IC	40.20 (13.45) 47 NR	Canada NR No	e-Intv: ≥college: 78.3% IC: ≥college: 77.4%	180.52	AUDIT-C Overall: 6.7 (2.10) e-Intv : 7.0 (2.1) IC: 6.4 (2.1)
Gustafson, 2014[6] 349 2	e-Intv + TAU	TAU	38.0 (10.0) 39.3 80.2	USA Smartphone No	Total population: <college: 92.0% ≥college: 8.0%	NR	NR
Hansen, 2012[7] 1380 3	e-Intv (PNF) e-Intv (personalized brief advice)	WL	44-65 (range) 45 NR	Europe Web access No	Total population: 15+ years of education: 51.7%	271.87	NR

Study; No. of participants randomized; No. of treatment arms	Intervention Type	Control Type	Age (Mean [SD]); % Female; % White	Location; Setting; VA? (Yes/No)	Education (by Category or Mean Years [SD])	Baseline Alcohol Intake (g/wk)	Baseline Alcohol Score (Instrument)
Hasin, 2013[8] 258 3	Motivational interviewing (MI) + interactive voice response (IVR)	MI IC	45.70 (8.10) 22 None (100% African-American)	USA NR (primary diagnosis is HIV) No	NR	NR	NR
Helzer, 2008[9] 273 3	Brief intervention from primary care physician (PCP-BI) + IVR PCP-BI + IVR + PNF	PCP-BI	45.10 (12.00) 38 NR	Europe NR (IVR study) No	Mean (SD): years PCP-BI + IVR: 14.8 (3.1) PCP-BI + IVR + PNF: 15.0 (2.7) PCP-BI (control): 14.9 (2.8)	430.48	NR
Hester, 2012[10] 144 2	e-Intv	TAU	20.40 (2.0) 38 57	USA University clinic No	Total population: ≥college: 100%	290.75	NR
Kypri, 2009[11] 2435 2	e-Intv	WL	19.70 (2.0) 45 NR	New Zealand Web access No	e-Intv: ≥college: 100% WL: ≥college: 100%	85.00	Instrument NR Overall: 14.2 (5.10) e-Intv : 14.2 (5.1) WL: 14.3 (5.1)
Kypri, 2008[12] 429 2	e-Intv	IC	20.1 (2.00) 52 NR	New Zealand NR No	e-Intv: ≥college: 100% IC: ≥college: 100%	NR	AUDIT Overall: 14.9 (5.10) e-Intv: 14.9 (5.1) IC: 15.1 (5.5)
Kypri, 2004[13] 104 2	e-Intv	IC	20.20 (1.62) NR NR	New Zealand University clinic No	e-Intv: ≥college: 100% IC: ≥college: 100%	NR	AUDIT Overall: 16.6 (5.85) e-Intv: 16.6 (5.7) IC: 16.6 (6.0)
Monahan, 2013a[14] 74 2	e-Intv (Alcohol 101)	MI (BASICS)	18-26 (range) 59 73	USA University research lab No	Total population: ≥college: 100%	176.83	NR
Monahan, 2013b[14] 133 3	e-Intv (e-CHUG)	MI (BASICS) WL	18-26 (range) 50 65.4	USA University research lab No	Total population: ≥college: 100%	205.18	NR

Study; No. of participants randomized; No. of treatment arms	Intervention Type	Control Type	Age (Mean [SD]); % Female; % White	Location; Setting; VA? (Yes/No)	Education (by Category or Mean Years [SD])	Baseline Alcohol Intake (g/wk)	Baseline Alcohol Score (Instrument)
Moreira, 2012[15] 1751 2	e-Intv	WL	17-19: 59.6% 20-24: 34.3% >25: 6.1% OR <25: 93.7% 62 NR	Europe NR No	Total population: ≥college: 100%	140.61	AUDIT Overall: 11.10 (7.01) e-Intv : 11.25 (7.15) WL: 11 (6.86)
Mundt, 2006[16] 60 3	IVR IVR + follow-up For relapse prevention	WL	41.9 (9.20) 45 95	USA NR (IVR) No	NR	NA (relapse prevention)	NR
Neighbors, 2010[17] 491 3	e-Intv (gender-specific feedback [GSF]) multi-dose (GSF2+)	Attention control (AC)	18.2 (0.60) 57.6 65.3	USA NR No	Total population: ≥college: 100%	159.12	NR
Neighbors, 2004[18] 252 2	e-Intv	WL	18.50 (1.2) 59 79.5	USA University No	Total population: ≥college: 100%	161.35	ACI (alcohol consumption inventory) Overall: 1.95 (1.35) e-Intv:2.03 (1.35) WL: 1.86 (1.35)
Neumann, 2006[19] 1136 2	e-Intv	WL	Median (range): 30.5 (24-29) 21 NR	Europe Clinic No	NR	188.91	AUDIT (median [IQR]) e-Intv: 7 (6-11) WL: 8 (6-11)
Riper, 2008[20] 261 2	e-Intv	IC	46.1 (9.1) 49 NR	Europe NR No	e-Intv: <college: 31.5% ≥college: 68.5% IC: <college: 29 ≥college: 71	436.00	NR
Schulz, 2013[21] 448 2	e-Intv	WL	41.72 (NR) 43.5 NR	Europe Web access No	Total population: ≥college: 34%	129.4	AUDIT≥ 8 Overall: 80%

Study; No. of participants randomized; No. of treatment arms	Intervention Type	Control Type	Age (Mean [SD]); % Female; % White	Location; Setting; VA? (Yes/No)	Education (by Category or Mean Years [SD])	Baseline Alcohol Intake (g/wk)	Baseline Alcohol Score (Instrument)
Sinadinovic, 2012[22] 202 2	e-Intv	TAU	32.5 (NR) 45 NR	Europe NR Dual diagnosis: ETOH + drug No	NR	NR	AUDIT-C Overall: 7.60 (2.85) e-Intv: 7.8 (2.7) TAU: 7.3 (3.0)
Voogt, 2013[23] 913 2	e-Intv	WL	20.9 (1.70) 40 NR	Europe NR No	Total population: ≥college: 100%	218.01	NR
Wallace, 2011[24] 2652 2	e-Intv	IC	38.0 (11.0) 57 NR	Europe NR No	e-Intv: ≥college: 52% IC: ≥college: 51%	368.00	AUDIT-C Overall: 8.5 (2.02)
Walters, 2009[25] 279 4	e-Intv (web FB only)	MI MI + FB WL	19.80 (NR) 64.2 84.6	USA University No	Total population: ≥college: 100%	206.95	Other RAPI alcohol-related problems Overall: 6.35 (6.45) e-Intv: 5.99 (6.01) MI: 6.37 (6.50) MI + FB: 6.67 (6.92) WL: 6.38 (6.35)

Abbreviations: AC=attention control; AUDIT=Alcohol Use Disorders Identification Test; AUDIT-C=Alcohol Use Disorders Identification Test-Consumption; e-Intv=electronic intervention; ETOH=alcohol; FB=feedback; g=grams; GSF=gender-specific feedback; GSF2+=multi-dose gender-specific feedback; HIV=human immunodeficiency virus; IC=information control; IQR=interquartile range; IVR= interactive voice response; MI=motivational interviewing; NA=not applicable; NR=not reported; PCP-BI=brief intervention from primary care physician; PNF=personalized normative feedback; RAPI=Rutgers Alcohol Problem Index; SD=standard deviation; TAU=treatment as usual; VA=Veterans Administration; wk=week; WL=waitlist

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APPENDIX F. E-INTERVENTION CHARACTERISTICS

Study	Population	e-Intv	Support Level	Computer Type	Computer Location	Security/ PHI?	e-Program Name	GS-PNF? Comparison	Treatment Technique	Face-to-face in e-Intv?	Live Therapy Sessions?	Computer Sessions (Number, Length)
Barnett, 2007[1]	Students	e-Intv	2	Software program on a PC (desk or laptop)	NR	NR	Alcohol 101	Yes; student peers	PsyEdu, AEdu	Yes, for intake only; F2F control	1 x 45 min individual session; 2nd, 25 min session 1 mo later in half of each arm if randomized to booster	1 x 20-25 min; 2nd x 20-25 min if randomized to booster
Bischof, 2008[2]	Adults	e-Intv + phone (full, stepped)	3	NR	NR	NR	NR	No	SBI, TF	Yes, with the e-Intv	4 scheduled calls, each 30-40 min	1, length NR
Boon, 2011[3]	Adults	e-Intv	2	Accessed via Web	University	NR	www.drinktest.nl	Yes; age-matched adults	SBI, NC, goals	RA for screening only	NA	1 x 10 min
Cucciare, 2013[4]	Adults	e-Intv	1	Accessed via Web	PC in clinic	NR	NR	Yes; age-matched adults	PsyEdu, NC	No	NA	1 x 10-15 min
Cunning-ham, 2009[5]	Adults	e-Intv	1	Accessed via Web	NR	Secure; no PHI	Check Your Drinking	Yes: age-matched adults	PsyEdu, NC, SBI	No	NA	1 x <10 min
Gustafson, 2014[6]	Adults	e-Intv after residen-tial treat-ment	2	Smartphone	Mobile	Secure; NR	A-CHESS	No	AS-Edu, CBT, email, GPS, peer, RP, S-M, text	No	No	41% used some features daily; weekly check-in
Hansen, 2012[7]	Adults	e-Intv PFI & PNF	1	Accessed via Web	NR	Secure; NR	NR	Yes; municipality residents	SBI, NC, PsyEdu	No	NA	1, length NR
Hasin, 2013[8]	Adult-HIV patients	IVR+MI	3	NA: IVR	NA	NR	NR	NA (IVR)	PsyEdu, SBI, S-M, goals	Yes, MI with PhD; F2F control	3 in-person sessions 1st: 20-25 min; 2nd/3rd: 10-15 min	IVR, 60 days, 1-3 min per day
Helzer, 2008[9]	Adults	IVR	3	NA: IVR (PCP-BI+IVR; PCP-BI+IVR+PNF)	IVR on phone	NR	NR	NA (IVR)	SBI, S-M, goals	Yes, for intake only; F2F control	NR	Daily IVR x 6 mo; Monthly group; length NR

Study	Population	e-Intv	Support Level	Computer Type	Computer Location	Security/ PHI?	e-Program Name	GS-PNF? Comparison	Treatment Technique	Face-to-face in e-Intv?	Live Therapy Sessions?	Computer Sessions (Number, Length)
Hester, 2012[10]	Students	e-Intv	2	Software program on a PC (desktop or laptop)	Student health clinic	Secure; no PHI	College Drinker's Checkup	Yes; student peers	SBI, NC, goals, DBE	RA for screening only	NA	1 x 35 min
Kypri, 2009[11]	Students	e-Intv	1	Accessed via Web	Home	NR	THRIVE	Yes: age-matched, New Zealand population	PsyEdu, NC, Hwk, TF	No	(Extensive assessment)	2 (1 + "booster" at 1 mo); length NR
Kypri, 2008[12]	Students	e-Intv x 1 (multi-dose x 3)	2	Accessed via Web	NR	NR	NR	NR	SBI, AS-Edu	RA for screening only	NA	1 or 3 SBI sessions; median length 9.3 min
Kypri, 2004[13]	Students	e-Intv	2	Accessed via Web	Student Health Clinic	NR	NR	NR	SBI, NC, AS-Edu, CMN	RA for screening only	Technical aid plus gave leaflet	1, average length 11.2 min
Monahan, 2013a[14]	Students	e-Intv	1	Software program on a PC (desktop or laptop)	Research lab	NR	Alcohol 101	No	PsyEdu	Yes, graduate student for intake; F2F control	1 individual session, 50-60 min	1 x 30+ min
Monahan, 2013b[14]	Students	e-Intv	1	Software program on a PC (desktop or laptop)	Research lab	NR	e-CHUG	Yes; student peers	PsyEdu	Yes, graduate student for intake; F2F control	1 individual session, 50-60 min	1 x 30+ min
Moreira, 2012[15]	Students	e-Intv	1	Accessed via Web	NR	NR	NR	Yes, but not GS; student peers	SBI, AS-Edu	No	NA	1, length NR
Mundt, 2006[16]	Adults: Relapse prevention	IVR IVR + FU	3	NA: IVR	NA	Secure; no PHI	NR	NA (IVR)	PsyEdu, SBI, S-M, goals	Yes, with study coordinator	4 calls; option to receive and/ or leave phone messages	IVR, 90 days, <5 min each day
Neighbors, 2010[17]	Students	e-Intv GSF, GSF2+	1	Accessed via Web	NR	Secure; NR	BASICS	Yes: student peers	SBI	No	NA	GSF: 1 GSF2+: 2-5 based on adherence (each 50 min long)
Neighbors, 2004[18]	Students	e-Intv	1	Accessed via Web	College classroom	NR	BASICS	Yes, but NR if GS; student peers	PsyEdu, SBI	No	NA but extensive assessment	1, length NR

Study	Population	e-Intv	Support Level	Computer Type	Computer Location	Security/ PHI?	e-Program Name	GS-PNF? Comparison	Treatment Technique	Face-to-face in e-Intv?	Live Therapy Sessions?	Computer Sessions (Number, Length)
Neumann, 2006[19]	Adults	e-Intv	2	Software program on a PC (desk or laptop)	Clinic	NR	FRAMES	Yes, but GS NA (all men)	PsyEdu, SBI, goals, TPR	RA for screening only	NA	1 x 90 min
Riper, 2008[20]	Adults	e-Intv	2	Accessed via Web	NR	Secure; no PHI	minderdrinken.nl	No	S-M, ST, goals	Moderated peer-to-peer discussion forum	6 wk	NR
Schulz 2013[21]	Adults	e-Intv	1	Accessed via Web	NA	NR	Alcohol-Everything Within Limits	Yes, but NR if GS; NR	AS-Edu, NC, PNF, PsyEdu, TF	No	No	3, length NR
Sinadinovic, 2012[22]	Adults: alcohol &drug	e-Intv	1	Accessed via Web	NR	NR	eScreen.se	Yes, but NR if GS; Swedish population	SBI, S-M, MI	No	NA	Unlimited; mean (SD) = 2.66 (4.31), length NR
Voogt, 2013[23]	Students	e-Intv	1	Accessed via Web	NR	NR	What Do You Drink (WDYD)	Yes; student peers	PsyEdu	No	NA	1 x 20 min
Wallace, 2011[24]	Adults	e-Intv	1	Accessed via Web	NR	Secure; no PHI	Down Your Drink	Yes; UK population	SBI, S-M, ST, goals, VC, RP	No	NA	Unlimited, length NR
Walters, 2009[25]	Students	e-Intv	1	Accessed via Web	Home	NR	e-CHUG (modified)	Yes: U.S. student norms	SBI, NC	No; F2F control	NA	1 x 30 min

Abbreviations: A-CHESS=Addiction-Comprehensive Health Enhancement Support System; AEdu=alcohol education through "virtual party," taking personal responsibility; AS-Edu=alcohol-specific education; BASICS=Brief Alcohol Screening and Intervention for College Students; CBT=computerized cognitive-behavioral therapy program; CMN=correction of misperceived norms; DBE=decisional balance exercise; e-CHUG=Electronic Check-Up to Go; e-Intv=electronic intervention; email=email response from counselor; F2F=face-to-face; FRAMES=feedback, responsibility, advice, menu of options, empathy, self-efficacy; FU=follow-up; goals=goal-setting; GPS=global position monitoring of high-risk locations; GS=gender-specific; GSF=gender-specific feedback; GSF2+=multi-dose gender-specific feedback; GS-PNF=gender-specific personalized normative feedback; HIV=human immunodeficiency virus; Hwk=homework; IVR= interactive voice response; MI=motivational interviewing; min=minute(s); mo=month(s); NA=not applicable; NC=negative consequences; NR=not reported; PC=personal computer; PCP-BI=brief intervention from primary care physician; peer=online peer support; PFI=personalized feedback intervention; PHI=protected health information; PNF=personalized normative feedback; PsyEdu=psychoeducation; RA=research assistant; RP=relapse prevention; SBI=screening and brief intervention; SD=standard deviation; S-M=self-monitoring; ST=skills training; text=motivational quotes via text message; TF=tailored feedback (blood level); THRIVE=Tertiary Health Research Intervention Via Email; TPR=taking personal responsibility; VC=values clarification; WDYD=What Do You Drink; wk=weeks

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