European Monitoring Centre
for Drugs and Drug Addiction

EMCDDA Best Practice Portal: Protocol for updating the Evidence database

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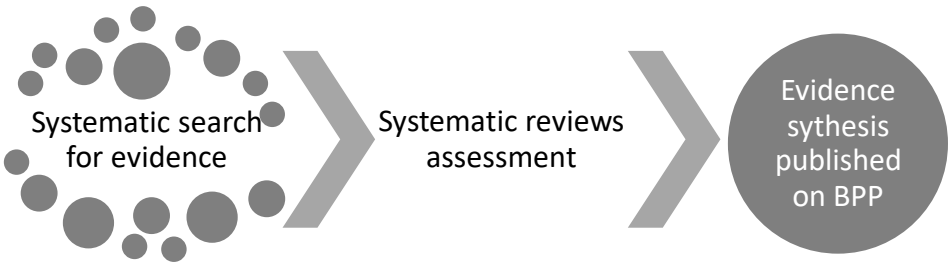
Introduction

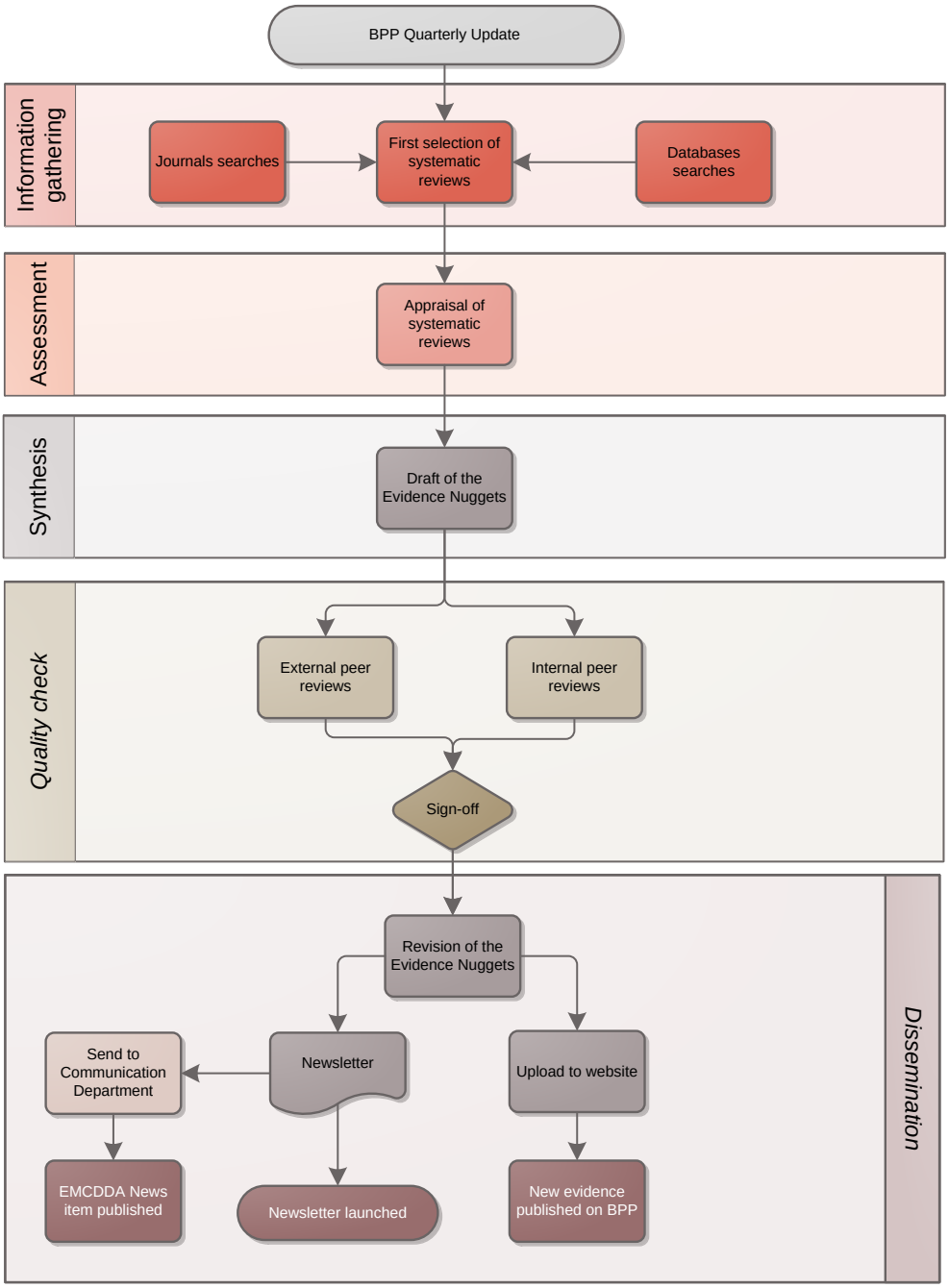
The Evidence database is a core component of the EMCDDA's Best Practice Portal. The portal is a resource for professionals, policymakers and researchers in the drugs field and provides information on the available evidence on drug-related prevention, treatment and harm reduction, focusing on the European context. The evidence is compiled following an explicit methodological process which is described in this document.

Methods

The protocol of updating the Best Practice Portal evidence database consists of a simple process of information gathering, assessment and synthesis.



We update the evidence database on a quarterly basis following a thorough workflow.



Information gathering

The Evidence database of the EMCDDA's Best Practice Portal is based on results of systematic reviews, i.e. not primary studies.

The main sources of information are scientific online databases (Cochrane Library, PubMed and Embase) and specialised journals accessed via our internal library service (see Appendix 1).

We have set up specific search strings with some filters (see the actual search string in Appendix 1).

- Type of articles: only reviews and meta-analysis
- Time of publication: last quarter

- Excluded terms: animal studies, alcohol, tobacco, pain management (poly-substance use is generally included when at least one substance is an illegal drug relevant to the European context)

Assessment

We screen the titles and apply our inclusion and exclusion criteria. After the selection is completed, we assess the quality of evidence against an EMCDDA checklist based on validated tools such as PRISMA, AMSTAR, CASP, JBI checklists and McMaster Health Evidence™ [1] (Appendix 2).

We do not formally grade the quality of the review, but we use the results to attribute the rank of recommendations used in the portal (Beneficial, Likely to be beneficial…..)

Our system is inspired by the GRADE methodology and definitions[2] (see table1).

Table 1. GRADE certainty of evidence and definitions.

Certainty rating	**Definition**
High	Further research is very unlikely to change our confidence in the estimate of effect
Moderate	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
Low	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate
Very low	Any estimate of effect is very uncertain

[1] http://prisma-statement.org/PRISMAStatement/Checklist, https://www.bmj.com/content/358/bmj.j4008, https://casp-uk.net/casp-tools-checklists/, https://joannabriggs.org/ebp/critical_appraisal_tools, https://www.healthevidence.org/our-appraisal-tools.aspx

[2] https://www.gradeworkinggroup.org/

Synthesis

The results of the included reviews are synthesised into **Evidence nuggets**: brief snippets of text summarising the main intervention(s) tested, the comparison(s) if available and the outcome(s), including effect measures if available in the publication, following the PICO logic[3].

Each Evidence nugget is ranked according to the rating system used in the Portal which **grades the evidence of the effects of an intervention**, i.e. whether the intervention tested achieved (or did not achieve) the intended outcomes.

We rank them as:

Effects rating	Definition
Beneficial	Interventions for which precise measures (i.e. statistically significant results as indicated in the reviews) of the effects in favour of the treatment were found in the systematic reviews of experimental studies. An intervention ranked as 'beneficial' is suitable for most contexts and for most patients. We also include interventions recommended in guidelines with reliable methods for assessing evidence.
Likely to be beneficial	Interventions that were shown to have limited measures of effect, that are likely to be effective but for which evidence is limited. An intervention ranked as 'likely to be beneficial' is suitable for most contexts and patients, with some discretion. We include also those interventions that are recommended with some caution in guidelines with reliable methods for assessing evidence.
Trade-off between benefits and harms	Interventions that obtained measures of effects in favour of treatment and are recommended in guidelines with reliable methods for assessing evidence, but that showed some limitations or adverse effects that need to be assessed before providing them.
Unknown effectiveness	Interventions for which the outcome measures were not statistically significant (not enough studies or where available studies are of low quality, e.g. with a small sample size or with uncertain methodological rigour), making it difficult to assess if they are effective or not. Interventions for which more research should be undertaken are also grouped in this category.
Evidence of ineffectiveness	Interventions that gave negative results if compared with a placebo, a standard intervention or no intervention, for example.

[3] https://training.cochrane.org/handbook/current/chapter-02

The categories of effectiveness were created following those adopted by BMJ Clinical Evidence which were originally developed in the Cochrane Collaboration first editorial group for the publication "A guide to effective care in pregnancy and childbirth"[4].

Quality check

The quality mechanism that we have set up includes different steps.

The first quality check is the review and approval of the results of the appraisal exercise as well as the Evidence nuggets by the head of the Support to Practice sector, senior expert in systematic review and evidence based medicine.

We then send the Evidence nuggets to a double peer review process.

Within the EMCDDA, we send them to senior scientific staff with experience and formal education in Epidemiology and Cochrane systematic reviews of evidence.

In parallel we send them to external peer reviewers selected from our Best Practice Portal network as well as the EMCDDA Scientific Committee. A specific form has been developed to facilitate the process (see Appendix 3). The external reviewers (2 to 3) are selected ad-hoc according to the content and research field of the updates of the updating cycle. The people are contacted and emailed the form. They are requested to evaluate the synthesis of the evidence, the ranking and the references.

Dissemination

We have a diversified dissemination strategy for the Best Practice Portal Evidence Updates:

1. the Evidence nuggets are uploaded and published in the Evidence Database of the Best Practice Portal;
2. the EMCDDA Best Practice Portal newsletter which is drafted at the same time that the Evidence nuggets are developed and finalised after the peer review process, highlighting the main updates and providing links to the portal as well as new publications, both internal and of our partners;
3. a formal EMCDDA news item which is published on the agency's website at the same time that the newsletter is launched.

[4] https://oxfordmedicine.com/view/10.1093/med/9780192631732.001.0001/med-9780192631732-chapter-050

Appendix 1 - List of information sources for the Evidence Database

Source	Action	Timing	Comments
Cochrane Library	Check for new/updated systematic reviews	According to publication schedule	https://www.cochranelibrary.com/search
Campbell Collaboration	Check for new/updated systematic reviews	According to publication schedule	https://www.campbellcollaboration.org/library.html
Pubmed	Perform search and save results with abstracts	Quarterly	((((((((("substance-related disorders"[MeSH Terms] OR ("substance-related"[All Fields] AND "disorders"[All Fields]) OR "substance-related disorders"[All Fields] OR ("substance"[All Fields] AND "related"[All Fields] AND "disorders"[All Fields]) OR "substance related disorders"[All Fields]) OR ("substance-related disorders"[MeSH Terms] OR ("substance-related"[All Fields] AND "disorders"[All Fields]) OR "substance-related disorders"[All Fields] OR ("substance"[All Fields] AND "abuse"[All Fields]) OR "substance abuse"[All Fields])) OR (substance[All Fields] AND misuse[All Fields])) OR ("substance-related disorders"[MeSH Terms] OR ("substance-related"[All Fields] AND "disorders"[All Fields]) OR "substance-related disorders"[All Fields] OR ("substance"[All Fields] AND "dependence"[All Fields]) OR "substance dependence"[All Fields])) OR substance use disorder[Other Term]) AND ((((("review"[Publication Type] OR "treatment outcome"[MeSH Terms]) OR "meta analysis"[Publication Type]) OR review[Other Term]) OR meta-analysis[Other Term])) AND ("20xx/xx/xx"[PDAT] : "20xx/xx/xx"[PDAT])) NOT ("ethanol"[MeSH Terms] OR "ethanol"[All Fields] OR "alcohol"[All Fields] OR "alcohols"[MeSH Terms] OR "alcohols"[All Fields])) NOT ("pain management"[MeSH Terms] OR ("pain"[All Fields] AND "management"[All Fields]) OR "pain management"[All Fields])) NOT ("neurosciences"[MeSH Terms] OR "neurosciences"[All Fields] OR "neuroscience"[All Fields])) NOT ("tobacco"[MeSH Terms] OR "tobacco"[All Fields] OR "tobacco products"[MeSH Terms] OR ("tobacco"[All Fields] AND "products"[All Fields]) OR "tobacco products"[All Fields])

Embase	Perform search and save results with abstracts	Quaterly	('illicit drug'/exp OR 'illicit drug' OR 'drug dependence'/exp OR 'drug dependence' OR 'substance use'/exp OR 'substance use') AND ('systematic review'/exp OR 'systematic review') AND 20xx:py AND ([xx-x-20xx]/sd NOT [xx-x-20xx]/sd OR ([xx-x-20xx]/aip NOT [xx-x-20xx]/aip))
Effectiveness Bank alert	Weekly updates on recent evaluation studies and reviews	Continuous	http://findings.org.uk/ http://findings.org.uk/docs/dmatrix.php
Multiple journals TOC alerts	EMCDDA library service	Continuous	EMCDDA Library service
Bilateral communication from EMCDDA colleagues	Emails/documents/references of potential interest	Continuous	

Appendix 2 - EMCDDA appraisal checklist

EMCDDA appraisal checklist for systematic reviews and research syntheses

Reviewer 1:
Date:

(Optional) Reviewer 2:
Date:

Inclusion/Exclusion criteria	☑
1. The review addresses a drug-related intervention relevant to the European context • Intervention and/or programme that are provided (or likely to be provided) in Europe, according to the EMCDDA key indicators and new methods • **Exclusion**: policy and drug strategies are currently not included as well as supply reduction interventions	
2. The review addresses an illicit drug problem relevant to the European context • Focus of the intervention is an illicit drug common to the European context according to the EMCDDA key indicators • **Exclusion**: only alcohol, only tobacco, only prescription medicines, drugs not widely available in Europe, other types of dependences like gaming, gambling, eating disorders, etc. • Poly-substance use is generally included when at least one substance is an illegal drug relevant to the European context	
3. The review addresses relevant drug-related outcomes • Focus on broader drug-related outcomes, i.e. including both behavioural and social outcomes like quality of life and social integration • **Exclusion**: examples o intervention focusing on physical activities for drug users and outcomes measured are only fitness related o review on peer support involvement and outcomes measured are only related to the 'peer' working conditions	

If the review meets all the 3 criteria above, continue with the quality appraisal.

	yes	no	unclear	Not applicable
1. Is the review question clearly and explicitly stated? • explicit statement with reference to participants, interventions, comparisons, outcomes, and study design (PICOS) • rationale for the review in the context of what is already known available				
1.a Is the review an opportunistic publication? • Is the reviewer known in the field? • Is the information credible and supported by other reliable and authoritative sources? • Is it a 'reconditioning' of another publication?				

• How/by whom was the study funded? • Are the publisher and journal reputable?				
2. Were the inclusion criteria appropriate for the review question? • study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility • availability of (PRISMA) flow diagram of included studies				
3. Was the search strategy appropriate? • multiple database searches • evidence of logical and relevant keywords and limitations • full electronic search strategy a plus • no language restriction				
4. Was the quality of primary studies assessed appropriately? • each included study should be assessed for methodological quality using a standardised assessment tool/scale (e.g., GRADE, Cochrane RoB, EPOC QUADAS, etc..) • appraisal conducted by two or more reviewers independently • authors made sure they are distinguishing between studies and publications (i.e. not summing up denominators from multiple publications of the same study)				
5. Were the methods used to combine studies appropriate? • for all outcomes considered (benefits or harms) (i) simple summary data for each intervention group (ii) effect estimates and confidence intervals, ideally with a forest plot, should be available • if a **meta-analysis** is conducted, a test for homogeneity or heterogeneity is the minimum requirement that should be assessed across studies prior to determining the overall effect size • if a **systematic review** or a **narrative review** is conducted for which statistical analysis is not appropriate, the results of each study should be depicted in graph/table format in order to assess similarity across the primary studies				
6. Were recommendations for policy and/or practice supported by the reported data? • strength of the findings and the quality of the research should be considered in the formulation of review recommendations • limitations are discussed				

Overall appraisal (please highlight in bold):

Include Exclude Seek further info

Comments (Including reason for exclusion)

Appendix 3 - Peer review form

EVIDENCE DATABASE – Best Practice Portal Evidence Database - UPDATES

Peer review form

1. Do you agree with the synthesis of results?

o Yes
o No

2. Alternative suggestion(s)

3. Do you agree with the ranking of the evidence included?

o Yes
o No

4. Alternative suggestion(s)

5. Was the reference used appropriately?

o Yes
o No

6. Do you know reviews published in the previous three months that are eligible for inclusion? If yes, please include reference and link if available.