

Rapid Evidence Synthesis: Interventions for Alcohol-Related Harms

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Rapid Evidence Synthesis:

Rapid Evidence Syntheses (RES) are produced by the National Institute for Health and Care Research (NIHR) Applied Research Collaboration Greater Manchester (ARC-GM). The methods used are based on a framework set out in Norman et al. 2022 and previously registered on the Open Science Framework (OSF).^{a,b}

RES use evidence synthesis approaches and draw on the GRADE Evidence to Decision framework^c to provide rapid assessments of the existing evidence and its relevance to specific decision problems. In the first instance they focus on evidence from guidance and existing evidence syntheses. They are undertaken in a real-time context of decision-making around adoption of innovative health technologies and are designed to provide a “good-enough” answer to inform decision problems in a short timescale. RES methods are flexible and adaptive. They have evolved in response to user feedback and differ depending on the nature of the assessment undertaken.

RES are not intended to serve as a substitute for a systematic review or rapid review of evidence.

We welcome feedback and are particularly interested to hear how you have used this Rapid Evidence Synthesis.

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This work was undertaken by the National Institute for Health Research (NIHR) Applied Research Collaboration Greater Manchester (ARC-GM). The views expressed are those of the author and not necessarily those of the NIHR or the Department of Health and Social Care.

^a Norman, G. Rapid evidence synthesis to support health system decision making. *OSF registration*. 2020 [cited 2023]; Available from: osf.io/hsxk5

^b Norman, G., et al., Rapid Evidence Synthesis To Enable Innovation And Adoption in Health and Social Care. *Systematic Reviews*, 2022. **11**: p. 250. <https://doi.org/10.1186/s13643-022-02106-z>

^c Alonso-Coello, P., et al., GRADE Evidence to Decision (EtD) frameworks: a systematic and transparent approach to making well informed healthcare choices. 1: Introduction. *BMJ*, 2016. **353**: p. i2016.

1. Summary

A large number of overviews of reviews have been published on interventions for alcohol use and related harms. We report NICE guidance and draw on evidence from 52 overviews published between 2010 and 2023. **There is much more evidence at this level relating to effectiveness than to barriers and facilitators for interventions.** There is considerable variation in the reporting and methods used in the overviews and in their included reviews; **some of the evidence presented is likely to be more reliable (higher certainty) than other evidence.**

We identified evidence for broad population-level measures, evidence targeted at specific groups of people and specific types of interventions which mostly but not exclusively targeted those with some level of harmful drinking or relationship with alcohol. Specific types of interventions and specific groups documented reflect where overviews exist; there may be relevant interventions and groups which are not represented here because they are not currently included in an overview. **Broadly speaking interventions which are more intrusive or more intensive at any level have more evidence for effectiveness than those which primarily provide information.**

Population-level interventions encompass a wide range of approaches including legislation around availability of alcohol (sales restrictions) and restriction of activity (e.g. drink driving), advertising and information, fiscal policy and pricing. They also include non-statutory approaches such as campaigns in mass media; guidelines on alcohol consumption; and educational approaches in schools. Population level approaches can also be multi-component. Some approaches (e.g. taxation and driving limits) can only be implemented at a jurisdictional level by a national or regional government; others may be more locally implemented.

There is **guidance from NICE** which makes recommendations **about adjusting taxation and introducing minimum unit pricing.** The guidance also makes recommendations **that public health be a formal consideration in licensing decisions and that cumulative impact of licensed premises be considered.** They further recommended **enforcement of licensing laws and conditions, and identification and sanctioning of those in breach.** They recommended **restrictions on advertising where children and young people are impacted** and that a cost-benefit analysis of a total advertising ban be conducted.

The balance of the evidence from overviews of reviews is **that interventions which guide or restrict consumer behaviour (e.g. pricing and restriction of sales) are probably the most effective, with those which provide information (e.g. advertising campaigns) being less effective and possibly counter-productive.** There is evidence that there is an inverse relationship between pricing and consumption of alcohol which supports use of taxation and minimum pricing. Similarly there is evidence that limiting the availability of alcohol sales in terms of density of outlets and/or opening hours and enforcement of age limits on sales reduces consumption. There is also evidence that supports implementation and enforcement of drink-driving laws for the reduction of alcohol-related crashes, injuries and deaths.

There is **more limited and sometimes inconsistent evidence for other forms of interventions** including those targeting licensed premises. There is weak and inconsistent evidence around interventions in communities and workplaces and evidence that those in higher education are ineffective. There is some evidence that interventions which involve or mobilise communities and peers, or which target social norms around drinking may be more effective than similar interventions

which do not involve these approaches. Common approaches such as labelling, advertising bans or restrictions, and education or messaging are generally not supported by the evidence when used in isolation. **There was limited evidence from overviews of place-based interventions operating at a more local level** (e.g. a city, neighbourhood or other community). The impacts of population-level interventions on health equity are under-explored in the reviews included in overviews.

Interventions for specific groups: Children, adolescents and young people were the group most represented in overviews of interventions for target populations; in many cases the approach was based on school-based programmes for prevention of drinking for groups where alcohol is not legally available. Most of this evidence was published in languages other than English and we relied on available summaries. In line with the school-based interventions included in wider overviews (above) **the evidence was mixed but there was some evidence to support effectiveness; interventions which included multiple components, involved families, and supported personal and social development of skills and confidence may be more effective.**

NICE guidance recommends whole-school alcohol education which should include classroom activities/curriculum and also pastoral care, community and family involvement and involvement of appropriate outside agencies (e.g. health professionals and specialist teams). There are also recommendations for targeted interventions, support and interventions for children and older adolescents.

Also represented were disadvantaged groups and pregnant women; **for both of these the evidence was sparse but there is quite limited evidence for some benefits to managed alcohol programmes for people experiencing homelessness.**

Specific types of interventions related to people (mostly adults) at risk of alcohol-related harm. **NICE made recommendations for screening, advice and brief or extended brief interventions for people aged over 16 at risk from harmful or hazardous drinking.**

There was substantive evidence relating to brief interventions in healthcare settings; psychological interventions including interventions using motivational interviewing or related approaches; and digital interventions. There is **evidence supporting the use of brief interventions in reducing alcohol consumption**, but also evidence that the impacts may not be sustained beyond the short-medium term (disappearing by 12 months in some cases). Brief interventions with multiple follow-up contacts may be more effective. There is less clear evidence for their use in emergency/urgent care settings.

The **evidence for psychological interventions is quite mixed** and much of it is low or very low certainty and not specific to alcohol use. As above there is some evidence that interventions which used skills-based approaches may have some effectiveness.

There is **mixed evidence for computer/digital/online interventions**; where effects are found these are mostly small and short-term.

There was **substantive evidence for barriers and facilitators to delivery of brief interventions by healthcare professionals across multiple domains.** These included resources, beliefs and knowledge. **There was little directly relevant evidence for barriers and facilitators for interventions outside of healthcare settings**, or for the participant (the person receiving rather than delivering the intervention). However, there was some indirect evidence from interventions for other health behaviours that **barriers and facilitators may map to successful intervention approaches for alcohol use in the effectiveness literature (social support provision and confidence and skills building).**

2. Methods

2.1 Description of the Intervention

This RES takes a purposefully broad approach. Any intervention, policy or strategy with the aim of reducing alcohol-related harms, both direct and indirect, was considered. Therefore interventions conducted at the societal level, institutional level or individual level were considered. We also considered interventions which are universal and those which are targeted at particular groups of people. Interventions with multiple objectives (e.g. initiatives to reduce use of alcohol and substance misuse) were included provided that one of the primary aims is reducing alcohol-related harm. We did not restrict the settings in which interventions are conducted although we planned to prioritise those in high income countries or countries considered similar to the UK.

2.2 Key Questions

1. What is the evidence for the effects of interventions, policies or strategies which have the aim of reducing alcohol-related harms, whether directly or indirectly?
2. What are the barriers and facilitators to the impact of interventions, policies or strategies which have the aim of reducing alcohol-related harms, whether directly or indirectly?

2.3 Search

We searched Medline (Ovid), the Cochrane Database of Systematic Reviews (CDSR) and Prospero (the registry for most systematic review protocols).

For Medline we used a search strategy composed of two facets: a set of MESH and other terms to capture alcohol and alcohol use (adapted from an identified high quality overview of reviews) and a set of terms designed to act as a filter for overviews of systematic reviews, sometimes known as umbrella reviews or systematic reviews of reviews. We adapted the alcohol facet for the CDSR and applied the “overview” filter for review type. For Prospero we searched using the terms “alcohol*” or “drink*” in the title and applied the “Review of reviews” filter. Where appropriate we looked for published reviews for protocols identified from Prospero. Where reviews are published in languages other than English we relied on available English abstracts or summaries; where an abstract was the only available output of an overview we also included it.

We are conscious that the need to use filters for overviews of reviews may have led to the loss of sensitivity in the searches in Medline and Prospero. We are also aware that our search terms may not have identified relevant reviews which deal with substance abuse generally, including alcohol use but not focusing on it. For this reason we also used reference checking and forward citation searching where appropriate. We also checked appropriate websites for guidelines from organisations such as NICE or AHRQ.

2.4 Inclusion Criteria

This RES takes a very broad approach to most elements of inclusion criteria. We will accept authors' definitions of populations, interventions, comparators and outcomes. We have set out our own definition of eligible study designs, which acts as the limiting criterion for eligibility.

2.4.1 Population

The population is not restricted in this RES. We included both universal and targeted interventions for particular groups of people, implemented in any context although we planned to prioritise those with more relevance to the Greater Manchester context if needed.

2.4.2 Intervention

As noted above we included a very broad range of interventions provided that they have the aim of reducing one or more alcohol-related harms. We excluded interventions which were pharmaceutical treatments for alcohol addiction.

2.4.3 Comparator

We considered any comparators including alternative interventions and no intervention. We anticipated that much of the primary evidence included in systematic reviews (within the included overviews) might consist of uncontrolled before-and-after studies.

2.4.4 Outcomes

For Q1 we considered any outcomes which reflect alcohol-related harm including deaths and hospital admissions directly or indirectly related to alcohol. We included social as well as health outcomes (e.g. criminal offences or antisocial behaviour in which alcohol was a factor). We also considered indirect or surrogate outcomes such as volumes of alcohol sales or reported consumption levels. For Q2 we considered any identified barriers or facilitators to implementation, uptake or impact of interventions. We also considered features or components of interventions identified as relevant to these.

2.4.5 Study Designs

We limited this RES to systematic overviews of reviews. These are systematic reviews which only or principally include systematic reviews. We placed no restrictions on the types of systematic reviews which were included in an overview: any or all of quantitative (with or without meta-analysis), qualitative and mixed methods reviews could be included as could specific review designs such as realist reviews.

We also placed no restrictions on the designs of primary studies included in these included reviews; we anticipated that much of the evidence will come from non-randomised and often non-comparative studies.

Where we identified papers which contained both systematic reviews and primary studies we made a judgement as to whether the paper was primarily a review of reviews. For example where an overview included a small number of primary studies published after the search date of the most recent included review we included this. Review articles which include mainly primary studies with a small number of systematic reviews are typically not well-conducted and were not considered as meeting our criteria. In some cases we adopted a flexible approach to the included studies within overviews.

In considering whether a publication is a systematic review of reviews we considered the following:

- Systematic search of the literature that is not limited to one database.
- Clear inclusion and exclusion criteria that include the requirement for papers to be systematic reviews.
- Clear description of how many reviews were included and excluded.
- Clear identification and summary information for each included review.

Ideally reviews also met the following additional criteria:

- Quality assessment of included reviews.
- Synthesis of included reviews (i.e. not limited to descriptions of individual reviews).

2.5 Results of the search

We identified overviews of reviews which had the following types of scope:

- a) Overviews of reviews of alcohol interventions or policies in general
- b) Overviews of reviews of specific types of alcohol interventions or interventions in specific settings or aimed at a specific group
- c) Overviews of reviews of broader groups of interventions aimed at multiple behaviours: this includes those looking at substance misuse including alcohol and those with a wider public health remit which encompass (for example) smoking and healthy eating. These reviews may be general or may focus on specific types of interventions or specific settings or groups of people.

Two reviews were published in German, and we have briefly summarised the available English abstracts; one review was published in Norwegian, and we have summarised the available English summary document. We also identified a number of ongoing reviews which have not yet published their findings. These are noted but not discussed.

2.6 Synthesis

We have structured our synthesis by the question addressed (effectiveness or barriers and facilitators). Within this we have grouped evidence by the type of intervention or policy; settings in which interventions were implemented; and population or groups targeted. Where possible we have prioritised overviews which are recent, well-conducted and with a focus on alcohol (those looking at substance use including alcohol, or a wider set of interventions are considered in that order).

2.6.1 Limitations of this synthesis

We have not excluded any overviews due to language considerations but have had to rely on English abstracts or summaries in three cases. In one additional overview only an abstract could be identified.

For one important indication we have, in the absence of more rigorous evidence, discussed overviews which do not meet our inclusion criteria. In places we have also cited such reviews as supportive evidence for aspects covered by other overviews. We have also included two scoping overviews (which do not assess the results of their included reviews) because they contribute to areas with otherwise limited evidence.

We have not been able to consider overlap between overviews in terms of included reviews, so evidence may be represented more than once. More detailed work would be able to take account of this in future.

We have not formally assessed the quality of the included overviews (there is no specific tool for this but in future work we could use a tool designed for systematic reviews). We have noted where we have substantive concern about the quality of the overview.

We have of necessity accepted the judgments of the overview authors on the status of included reviews as systematic; where criteria were reported these varied widely. We were also dependent on authors for judgements on the reliability of their included reviews. In some but not all cases this was based on formal quality assessments, but it was sometimes not clear how judgements on the strength of the evidence had been made apart from this. That is, it is not always clear how the judgements related to the evidence from the included reviews and, ultimately, to the reliability, consistency and size of primary studies.

3. Results

3.1 Question 1: Effects of interventions

Guidance from NICE was published in 2010 on prevention of alcohol-use disorders. In 2019 a decision was made to update this but the update has not yet been published.(1) This guideline makes recommendations on pricing, availability, licensing and marketing.

3.1.1 Alcohol-related harm interventions or policies in general

A 2013 overview (search dates 2002 – 2012) of population level interventions considered 52 reviews across ten policy areas (alcohol server settings; availability; illicit alcohol; tax; mass media; drink-driving; schools; higher education; families and communities; workplaces).(2) Twelve reviews were rated as high quality and 29 as medium quality; 11 were low quality; there was at least one high or two medium quality reviews for all areas except illicit alcohol sales (only one low quality review). The overall view of the authors was that the evidence supports regulatory or statutory enforcement initiatives over non-regulatory and more targeted approaches. This was based on the assessments that there was good evidence for approaches to limit the sale availability of alcohol (eight reviews), to increase either prices of or taxation on alcohol (three reviews) and to reduce drink driving (11 reviews). They judged that evidence for interventions at the family or community level was mixed (three reviews), as was evidence for school based interventions (11 reviews). There was also mixed evidence for mass media interventions (three reviews) and interventions targeting settings which serve alcohol (five reviews). Evidence for workplace interventions was weak (three reviews) and there was evidence that interventions in higher education settings were ineffective (four reviews). There was also weak evidence for approaches targeting illegal alcohol sales (one review).

We identified a 2016 overview (search 2002-2014) of gender differences in the impact of population-level policy interventions.(3) This updated the overview of Martineau et al.(2) and analysed gender information across the included reviews. The authors identified the poor reporting of gender in the 63 included reviews; only 29 reported some gender-specific information about the impact of the assessed policies and only five consistently reported gender information for their included studies; in some cases a lack of information in primary studies was noted. The overview identified that there was no consistent evidence on gendered impact in many policy areas. In particular there was mixed evidence for possible gender differences in exposure to and impact of alcohol marketing. A failure to consider potential unintended consequences and harm to others in policies was also highlighted by the authors (e.g. the impact of taxation/pricing policies on assaults may have a gendered impact). A protocol has been registered for an updated and expanded version of this review.(4)

A 2018 overview (search limits 2006- 2016) looked at universal alcohol and drug prevention strategies; 54 reviews were included of which 46 looked at alcohol or at both alcohol and drugs.(5) Children, adolescents and young people were the focus of many of the included reviews, reflecting the focus on prevention of products which are legal for adult use. The review included non-systematic reviews, but these were few and assessed as low strength evidence. The authors concluded that there is sufficient high quality consistent evidence supporting universal preventive interventions in family and school settings for alcohol use by children but that more evidence is required for programmes in college, workplace, healthcare and community settings. Considering the

detail of the evidence presented, the effectiveness in schools may be less clear than this judgement suggests. There is some evidence to support different approaches for different age groups in childhood and adolescence. Strong consistent evidence supported an inverse relationship between taxation level and consumption and associated harm and some evidence for a positive relationship between availability and consumption. Banning alcohol advertising did not appear to reduce consumption. Programmes in workplaces did show some benefits to alcohol and drug testing; screening for risky drinking and peer-based or peer-led programmes may be more effective than health promotion activities more widely. Multicomponent approaches were supported by some evidence; many of these approaches contained substantial community-based components and/or school or family-focused elements.

A 2018 review included 29 reviews of primary and secondary prevention of health inequalities across seven public health domains of which alcohol was one.(6) All aspects of policy were eligible (fiscal, regulation, education, treatment, screening, multi-component). The quality of included reviews was generally poor. In relation to alcohol one review found an inverse relationship between tax and alcohol-related death levels (based on a single study of a tax reduction and an increase in deaths).

An 2019 overview looking at the macroeconomic determinants of health and health inequalities included 62 mostly low quality systematic reviews.(7) The overview identified positive evidence on an impact of alcohol taxes on health outcomes but no evidence addressing health equity. Regulating the density of outlets selling alcohol and using minimum unit pricing for alcohol had evidence for positive effects on health outcomes but inconclusive evidence for impacts on health equity.

A 2015 overview applied an equity lens specifically to an overview of reviews on alcohol use and related harms.(8) As in later reviews the lack of an evidence base for the contribution of policies and interventions to health equity/inequity was highlighted. This review included primary studies and other designs (e.g. economic modelling) in addition to systematic reviews; but we note it here as the only overview specific to alcohol use and as supporting evidence for the gap identified in wider reviews. It highlights interventions with potential for reducing inequities as including use of planning and licensing laws to prevent and reduce disproportionate clustering of outlets in disadvantaged areas as well as interventions targeting harms associated with existing licensed venues and interventions specifically for vulnerable populations. Interventions that may, perhaps paradoxically, worsen inequities through disproportionate impact include national guidelines (likely to improve health more for more advantaged people), technological interventions (which may contribute to digital exclusion from help for less advantaged people) and public drinking bans (which can disproportionately impact those from marginalised groups).

A 2010 overview of interventions targeting health behaviours included 103 reviews of which 15 focused on alcohol.(9) These targeted young people and children; problem drinkers including pregnant women; and dangerous activities such as drink-driving. Of the included reviews evidence supported brief behavioural counselling interventions for problem drinkers. Other interventions which had evidence of effectiveness all targeted drink-driving and included: increased police; car-ignition locks for convicted drink drivers; mass media designated driver campaigns; lower blood alcohol limits for young drivers and increased minimum legal drinking age.

We also identified a protocol for an ongoing overview of population-level policies to reduce alcohol use.(10)

3.1.2 Alcohol control interventions

On availability and licensing NICE guidance recommends revising licensing law to make public health protection an objective and to make health bodies the responsible bodies for licencing decisions; licencing bodies should be able to take into account the density of alcohol outlets and permitted sale times and to consider potential links to local alcohol-related issues (crime and disorder and health statistics related to alcohol).(1) More immediate sanctions for premises breaching their licenses should be considered. Licensing authorities and related bodies should map alcohol-related problems before developing or reviewing their licensing policy; and should consider a cumulative impact approach to policy where there is existing high outlet density. They should also ensure there are sufficient resources to prevent sales which contravene licensing terms (e.g. underage or intoxicated customers) and should use partnership with other bodies to identify and sanction those premises in contravention, this should include using mystery shoppers, penalty notices, and closure notices for premises repeatedly in breach.

A 2019 overview (11) considered selected alcohol control interventions from the 2010 WHO global strategy. (12) The overview included 42 reviews and identified the following as potentially beneficial: community mobilization; multi-component interventions in the drinking environment; restricting alcohol advertising; restricting on- and off-premise outlet density; police patrols and ignition locks to reduce drink driving; and increased price and taxation including minimum unit pricing.

We identified an additional rapid overview (2017) of alcohol control policies with an English perspective. (13) This does not meet all our inclusion criteria as it includes both reviews and primary studies and it is not always clear where findings are based on systematic reviews and where they are based on primary studies. We discuss it briefly for its relevance to the English policy context. This rapid overview broadly supported the findings of Martineau et al.(2) (above) in finding that legislative interventions were effective but that interventions focused on the drinking environment and it's immediate vicinity have at most a small impact on alcohol-related harm although those which reduce availability of alcohol, specifically late-night availability, were considered effective and cost-effective. Providing information and education were insufficient for sustained change in behaviour. Availability of alcohol is also considered in more general overviews (above).

3.1.3 Pricing and Taxation

NICE guidance suggests considering minimum pricing per unit of alcohol; adjusting tax levels to reflect units of alcohol rather than beverage type; and regular reviews of alcohol duties and any minimum price/unit to ensure they do not become more affordable over time.(1) Prices and taxes were evaluated by a 2022 overview.(14) This included 30 reviews of which six were themselves umbrella reviews (including 12 unique reviews). The authors considered the evidence that higher alcohol taxes are associated with lower alcohol consumption to be overwhelming, based on five overviews and 14 reviews, but that the exact relationship varies depending on beverage type (e.g. beer, wine, spirits). There was also evidence to support a selective effect of taxation increases on heavy drinkers' consumption. There was no or limited evidence on the impact of taxation increases on participation in drinking, beginning to drink or ceasing to drink. Taxation is also considered effective in more general reviews (above).

3.1.4 Public health responsibility (partnership)

A 2015 overview (15) considered four policy pledges which were included in the English Public Health Responsibility Deal between government, industry and other stakeholders.(16) These were: alcohol labelling (unit content, government guidelines, warnings, counter advertising; measures to reduce underage alcohol sales (age verification); alcohol advertising and marketing (education, responsible drinking messages, banning advertising near schools); and alcohol unit reduction and promotion of smaller measures. Fourteen reviews were included, and interventions were considered in relation to the Ladder of Interventions which considers approaches as ranging from doing nothing through providing information to restricting or eliminating choices. Most interventions (60%) provided information with smaller numbers aiming to enable or guide choices (25%); only 15% aimed to restrict or eliminate choice. The authors concluded that the policy pledges in the Responsibility Deal did not consistently include the most effective strategies which include reducing availability of alcohol and increasing its cost.

Their overview found that alcohol labelling is likely to have only a limited effect on consumption with labels promoting drinking guidelines and warnings about drinking in pregnancy unlikely to influence behaviour although they can increase awareness. While removing advertising near schools can contribute to reducing underage drinking; other strategies such as community mobilization and law enforcement are most effective; multicomponent strategies with both of these have the most evidence. They found that messages about responsible drinking are ambiguous, and industry-funded alcohol prevention campaigns such as DrinkAware can actually promote drinking. They also found that reduction in alcohol consumption is more likely if lower-strength alcohol products are made cheaper (differential pricing) or if higher strength drinks are differentially restricted in availability.

Guidance on marketing relates to children and young people's exposure. NICE recommended strengthening current regulations to ensure appropriate limits for advertising relate to the proportion of an audience aged under 18; adequate protection for young people and children where advertising is permitted; a stringent regulatory system for alcohol marketing particularly on internet-based platforms; regulatory structures being regularly reviewed.(1) However they also recommended that a cost-benefit analysis of a complete advertising ban should be conducted.

3.1.5 Changing collective social norms

A 2018 overview looked at policies and programmes designed to change social norms around alcohol in order to reduce related harms. (17) Only two reviews were included and only one of these was a systematic review. The systematic review focused on community-based programmes aiming to change attitudes, norms and the environment in order to reduce under-age drinking. Of the seven included studies one RCT looked at the change in social norms in the community and found a reduction in parental acceptance norms with an intervention which included community organising as well as youth development work and youth and parent education.

3.1.6 Place-based interventions

We identified two overviews of place-based interventions. Neither met our inclusion criteria but they are included here because they appear highly relevant to decision making in Greater Manchester

because they look at place-based approaches, particularly relating to cities, communities and neighbourhoods.

A 2018 overview looked at “city-based action”. (18) This overview does not meet our inclusion criteria because the included reviews are all non-systematic. City-based action was defined as “the implementation of comprehensive policies and programmes to reduce harmful use of alcohol among adults at the community or municipal level”; interventions such as restrictions on sale were excluded unless they were part of a city action plan. This overview included five non-systematic reviews which included a total of 23 unique studies; it also included a large RCT. The overview identified the following as feasible options at the city level: sales taxes; restrictions on density of outlets and permitted sale times; drink-drive restrictions and scaling up of advice and treatment programmes for individuals. Examples of these are included which appear to be drawn from wider systematic reviews not included in the overview. It’s difficult to evaluate how reliable this evidence may be.

A rapid overview from 2015 included both reviews and primary studies of setting-based interventions for social determinants of health inequities, including alcohol use.(19) Settings considered were cities; communities and neighbourhoods; educational; healthcare; online; faith-based; sports; workplaces; prisons; nightlife; green; and temporary settings), and also cross-cutting factors (governance, legislation, regulation and policy). This overview does not meet our inclusion criteria because it mixes reviews and primary studies and does not clearly identify included research. The overview identifies the work of Martineau et al. on effectiveness of policies and interventions that limit alcohol sale availability, increase prices or taxation and reduce drink-driving, with mixed evidence for interventions in settings which serve alcohol (see above.)(2) They also note a systematic review of interventions in nightlife settings, which found that combining strategies such as community mobilisation, responsible service training, house policies and stricter licensing enforcement were most effective in reducing harms such as assaults and traffic accidents.

3.1.7 Interventions targeting alcohol as part of other focused harm reduction strategies

A 2021 overview of reviews for gambling harm reduction included strategies focused on reducing alcohol consumption.(20) The authors considered most included reviews to be weak in strength. One included review identified restriction on alcohol during gambling as being a potential harm minimisation strategy for problem gambling. We include this here as gambling and alcohol often occur together and potentially increase the harm from both behaviours.

Interventions targeting drink driving were included in a 2022 overview of interventions for preventing traffic accidents.(21) The overview included 35 reviews and at least three included alcohol-focused interventions. The overview found that there was strong evidence for the effectiveness of the following alcohol-focused interventions in preventing alcohol-related crashes and associated fatalities and injuries: random breath testing; selective breath testing; sobriety checkpoints. Methodological quality of reviews varied across the overview topics.

3.1.8 Targeted interventions for young people

Guidance from NICE on alcohol interventions in secondary and further education was published in 2019.(22) This includes recommendations on planning and delivering universal education programs on alcohol, and on targeted interventions. Alcohol education is recommended to take place as part of whole-school approaches and the use of pastoral support and school policies, together with

activities that involve families and communities is recommended in addition to classroom activities. The option of using input from health services and other external agencies is supported. Detailed guidance in structuring universal education programmes is provided. There is also advice on selecting groups or individuals for targeted interventions, tailoring these interventions and avoiding unintended consequences. There are also more detailed recommendations from an earlier guideline on supporting children and young people aged up to 15 who are thought to be at risk from their use of alcohol, and for screening and extended brief interventions for young people aged 16 and 17.(1)

We found four overviews of interventions for young people – one specific to alcohol and the others looking at substance use more widely. Three of these were published in German (two overviews) or Norwegian and we have reported them here based on available English language abstracts or summaries. There is likely to be overlap between the reviews included in these overviews.

A 2020 overview looked at preventative interventions for alcohol use in young people aged up to 25. (23) The authors did not identify recent reviews of the effectiveness of policies at national or community level but included 34 reviews of a range of other interventions. They concluded that behavioural prevention was effective and should be targeted to the age group and the setting in question. They specifically recommended family and parenting programmes, behavioural programmes for personal and social skills (again specifically targeted), brief interventions with feedback, and mentoring programmes.

A 2016 overview of school-based strategies for prevention or reduction of substance use – including alcohol included 14 reviews.(24) Generally interventions focused on strengthening self-confidence and peer resistance were considered to show promising evidence of effectiveness. The authors also stated that multi-component and multi-level interventions are more suitable for prevention of alcohol or cannabis consumption.

A 2012 overview looked at interventions to prevent use of tobacco, alcohol and other drugs in children and adolescents.(25) The overview included ten high quality reviews, including eight Cochrane reviews; two reviews focused on alcohol. One looked at family-based interventions where most trials (7/9) found a benefit of interventions, and one looked at multicomponent programmes where 7/11 trials found a benefit of interventions.

A 2016 overview looked at interventions for multiple risk behaviours or aspects of health in young people. (26) This included 22 reviews of which two related to alcohol. The highest quality review found no evidence that multicomponent interventions were effective; although there was some evidence that when these interventions addressed multiple risk behaviours they may have some impact on alcohol use. There was mixed evidence from a medium quality review that multicomponent interventions may be effective but not that they were more effective than single interventions.

We also identified the protocol for an overview of school-based programs for preventing smoking and alcohol misuse in children and adolescents. (27) The Prospero record indicated that this had been completed and published but we could not find the publication and our attempt to contact the authors were unsuccessful. We also found protocols for ongoing overviews of risks and protective factors for alcohol use and dependence in adolescence and early adulthood,(28) and for interventions for alcohol use by students.(29)

3.1.9 Family-based interventions

One overview was only identified as a protocol and a published abstract although it was undertaken in 2013. (30, 31) The overview included eight reviews and reported evidence of effectiveness of family involvement in interventions and family-based interventions for adults who misuse alcohol, but not for adolescents. Because we are reliant on an abstract it's difficult to know how reliable the basis for these conclusions is, however the protocol suggests that robust methods were used in the overview.

3.1.10 Health promotion interventions in pregnancy

A 2020 overview looked at interventions for smoking, alcohol, diet and activity during pregnancy. (32, 33) Four of the included reviews focused on alcohol but the overview authors found a lack of consistent evidence for the effect of interventions on either alcohol consumption (quantity) or alcohol abstinence.

3.1.11 Interventions for disadvantaged groups

A 2020 overview of substance use interventions for people who are homeless or vulnerably housed included managed alcohol programmes and safe consumption sites for alcohol as well as drugs.(34) The interventions included in the overview were selected using a Delphi process with healthcare practitioners and people with lived experience of homelessness. Of the 30 included reviews three looked at managed alcohol programmes; three reviews looked at supervised consumption facilities, but these were focused on injected drugs. A 2012 Cochrane review looking at managed alcohol programmes had no included studies; two reviews from the grey literature (from 2015 and 2018) included mostly uncontrolled studies of small pilot programmes. These reviews suggested that such programmes may stabilise consumption, reduce consumption of alcohol from products not designed to be drunk, facilitate engagement with health or social services, and reduce unscheduled healthcare visits and admissions as part of a wider reduction in negative consequences of drinking (health, social, legal harms). The authors identified that a managed alcohol programmes were currently being assessed a national evaluation in Canada which may provide evidence with greater certainty but that there are major challenges to research in this field.

A 2022 scoping overview of reviews mapped the evidence for interventions targeting lifestyle risk behaviours, including alcohol use, in disadvantaged groups (a wide range of vulnerable or marginalised groups or communities).(35) The overview included 92 reviews; most were focused on people with low income/socio-economic status (SES). Five reviews focused on alcohol use among people with low income. The empty Cochrane review on managed alcohol programs for people with low income and/or homelessness was also included. Scoping reviews do not assess the effectiveness of interventions, but this is a useful indicator that there is a more limited literature in groups who are disadvantaged.

We identified a protocol for an ongoing overview of public health interventions for alcohol, tobacco and ultra-processed food in lower SES groups.(36) A second overview protocol looks at effects of public policy interventions on socioeconomic inequalities in alcohol or illicit drug use and associated health outcome inequalities.(37)

3.1.12 Targeted interventions for harmful drinking and dependence

A 2023 overview looked at systematic reviews with meta-analyses of interventions for people with alcohol use disorder or who were harmful drinkers.(38) The limitation to reviews with a meta-analysis may have led to the exclusion of some relevant evidence. The aim was to identify interventions which should be available in a universal healthcare programme and the overview included 86 reviews looking at pharmacological as well as non-pharmacological interventions. For non-pharmacological approaches for harmful drinking they found a potential significant long-term effect of mentoring for adolescents and children and small effects of brief interventions, cognitive behavioural therapy and motivational interviewing for adults. Social network approaches showed evidence of a sustained effect for alcohol use disorder.

3.1.13 Screening and brief interventions (universal and targeted)

NICE made recommendations for screening, advice and brief or extended brief interventions for people aged 16 or over.(1) These are extensive but include the need to plan for prioritising prevention of alcohol-use disorder as an “invest to save” measure and the development of local joint alcohol needs assessments which should include screening and brief interventions for hazardous and harmful drinkers in integrated care pathways for alcohol treatment. There is a specific recommendation that disadvantaged groups should be considered in this planning. Screening of adults within routine practice is recommended; where resources do not permit universal approaches to people in contact with health services, groups most at risk should be targeted (these are listed). Brief advice, brief interventions, extended brief and referrals are all covered in the recommendations which follow from this; these differ for people aged 16-17 and those aged over 18.

Two overviews, from 2014 and 2015 looked at brief interventions by healthcare professionals for alcohol use in primary care.(39, 40) The 2015 review included seven reviews of RCTs aimed at the general population (excluding targeted interventions for hazardous, at-risk of excessive drinkers).(39) The authors concluded that there is evidence of a moderate effect of brief interventions on alcohol use. Five reviews reported moderate decreases in alcohol consumption and four a decrease in the proportion of participants drinking at risky levels. There were a range of interventions included and some comparisons of different intervention lengths/approaches are also reported; the authors concluded that brief interventions are most effective where there are multiple contacts of follow-up sessions.

The 2014 overview had broader inclusion criteria (it did not exclude reviews targeting hazardous or heavy drinkers) and included 24 systematic reviews of RCTs.(40) The authors concluded that there was consistent evidence for the effectiveness of brief interventions in addressing hazardous and harmful drinking, especially in middle-aged male drinkers. They identified evidence gaps for women, older and younger drinkers, minority ethnic groups and dependent drinkers or those whose harmful drinking was comorbid with another issue. They also identified a gap in the evidence for the optimum length and frequency of interventions for longer-term effectiveness.

A 2023 rapid overview (search 2010-2023) looked at interventions in emergency departments or trauma units; 15 of the 18 included reviews focused on alcohol.(41) There was variation in the effectiveness of interventions which may be explained by differences between the intervention designs (intensity, duration and content), the staff delivering them and the populations targeted (adults, children or adolescents; universal or selected on basis of admission reason). Most interventions were brief and formed part of screening, brief intervention and referral approaches.

Some reviews found a significant decrease in alcohol consumption and alcohol-related outcomes, but this was particularly found at short-term follow-up and in specific population groups.

3.1.14 Psychological interventions for alcohol use disorders

A 2023 overview included 13 reviews of specifically targeted psychological interventions for people with alcohol use disorders as single or comorbid conditions.(42) Telehealth (mHealth) interventions were only eligible if they were used for interventions delivered by humans. Only reviews with a meta-analysis were included which may have led to the exclusion of some relevant evidence. This is made more likely by the exclusive focus on the eight reviews showing a positive effect of the intervention. This evidence should be treated with caution for this reason. Like the reviews focused on this (39, 40) they identified brief interventions as being effective alone or in combination with psychotherapy. The following types of interventions were also identified as effective: behavioural couples therapy, cognitive behaviour therapy combined with motivational interviewing, contingency management, Alcoholics Anonymous and 12-step treatment programs, family-therapy or family-involved treatment, and community reinforcement approach. They also considered the components of what were often complex interventions and identified the following strategies as the most common components in effective interventions: assessment, personalised feedback, motivational interviewing, goal setting, setting and review of homework, problem solving skills and relapse prevention/management.

A 2017 overview of motivational interview-based interventions for substance abuse, including alcohol, and gambling included 34 reviews (search dates 2007-2017).(43) Twenty of the included reviews related to alcohol. It's not clear that all reviews were systematic but included reviews included Cochrane reviews and review quality was assessed. The overview concluded that there was strong evidence that interventions enhancing motivation were effective in alcohol abuse. Included reviews looked at motivational interviewing in adults, adolescents and young adults; there was less evidence but still evidence of effectiveness in college students, people with dual diagnoses and men who have sex with men. Brief interventions which included motivational interviewing components showed less evidence in adults, with a Cochrane review finding weak and inconclusive evidence; a similar picture was found in adolescents/young adults and college students.

A 2018 overview looked at motivational interviewing for health behaviours for adults in health and social care settings.(44) The overview identified 104 reviews of which 39 used meta-analyses. Thirty-one of these related to alcohol or drugs misuse of which eight were focused on people with mental health problems and 13 primarily focused on alcohol. The evidence was graded as low or very low certainty in most cases. Statistically significant but small benefits were found in 11/155 of the total number of meta-analytic comparisons in the review, and these included outcomes which included binge drinking and frequency and quantity of alcohol consumption. Because the evidence is low or very low certainty we cannot be sure whether this reflects the true effect estimates for the comparisons.

A 2020 overview looked at interventions using self-regulation principles for unhealthy risk-taking behaviours.(45) Twenty-one reviews were included and six included a focus on alcohol. The authors did not report results separately for the type of behaviour targeted. Overall they identified intervention features which were associated with reduced risk taking. These included using multiple components; targeting a specific behavioural outcome; provision of some therapeutic intervention (e.g. counselling, stress-management) or a skills-based intervention (e.g. self-monitoring, self-control

and impulsivity training). Social support from peers; tailoring of interventions and adjustment of interventions to overcome barriers which were identified were also important.

We also identified the protocols for ongoing overviews of psychological interventions for alcohol misuse and common mental disorders,(46) and preventive interventions for physical activity, diet, tobacco and alcohol use in people with mental illness.(47)

3.1.15 Computer-based, digital or online interventions for alcohol use disorders

A 2017 overview of 14 reviews focussed on computer-based interventions; reviews including a mixture of intervention delivery methods were excluded.(48) The review considered evidence for adult, student and mixed populations separately. The overview found that there is generally a small, short-medium term but consistent effect of interventions on alcohol consumption of between 2-3 UK alcohol units/week. Effects may be smaller in student populations, but the reviews focused on adults also focused on problem drinkers which is a likely confounding factor. There was no clear evidence of impact on binge drinking or alcohol-related harm. There was also mixed or absent evidence for the effect of intervention duration, therapeutic orientation/strategy or the addition of guidance (additional human interaction).

A 2021 overview (search date 2009-2019) looked at digital interventions for behavioural risks of cardiovascular disease in adults and included 104 reviews of which six targeted alcohol consumption and were mostly aimed at “problem drinkers”; seven reviews included alcohol use in a wider intervention.(49) Most reviews were rated as low or critically low quality. The reviews generally found benefits of the digital interventions compared to no intervention or a mix of no interventions and alternative interventions, but not compared to alternative interventions only. Most reviews which found short term benefits found that these reduced or disappeared with longer follow up (e.g. 12 months).

A 2013 overview of online prevention for behaviours including alcohol use found 41 reviews of which five focused on alcohol use and another four included it.(50) The results of the included reviews were inconclusive, with uptake and adherence to interventions identified as issues; these varied depending on the characteristics of participants (risk profile, sex, relationship and parenthood status).

3.1.16 Exercise interventions for mental and substance abuse disorders

A 2020 overview included 27 reviews.(51) Most reviews looked at people with a diagnosed mental illness but three considered exercise for people with alcohol use disorder or dependence, or substance abuse disorder. The results differed between the reviews as to whether the exercise interventions (which were heterogenous) were effective for measures of alcohol consumption (from positive to mixed to null effects); there was some evidence from two reviews that depressive and anxiety symptoms may be reduced.

3.2 Question 2: Barriers and Facilitators

3.2.1 All interventions

The 2022 scoping overview for reducing lifestyle risk behaviours in disadvantaged groups found 11 reviews which explored barriers or facilitators to behaviour change or a combination of these and interventions (eight reviews) but none of these related to alcohol use.(35) This evidence may be indirectly relevant to alcohol use so it is worth noting that both barriers and facilitators identified were wide ranging and included elements of social support, environment, habits or routines, and cultural norms, physical environment, financial or time constraints, resources and services; comorbidities (mental and physical) and addiction; issues relating to knowledge, confidence, understanding, skill or motivation. All of these were present in some form as both barriers and facilitators.

A 2020 overview looked at interventions using self-regulation principles for unhealthy risk-taking behaviours.(45) Components of interventions which were most frequently associated with effective reduction of risky behaviour included personalised feedback; identification of barriers and ‘resolution’ of barriers; tailoring to age and ethnicity; and incorporating social support by peers. This does not identify potential barriers but does identify the importance of doing so, and of attempting to remove them. Tailoring of interventions and use of social support may not be independent of this.

A 2021 overview of risks and protective factors for alcohol and tobacco use disorders looked at meta-analyses of observational studies. This mostly identified co-morbid depression, anxiety or ADHD as risk factors for alcohol use. However two of the included reviews identified the more modifiable factors of parental permissiveness or approval and parental supply of alcohol as risks.(52) A 2021 scoping review looked at a complex systems perspective for alcohol consumption and related harm. While not primarily an overview, the authors identified three systematic reviews which documented associations between social network characteristics and processes and alcohol consumption in adolescents or adults.(53) The findings from these overviews are indirectly relevant but may support importance of relationships and networks as barriers or facilitators to interventions for alcohol consumption.

3.2.2 Barriers and facilitators for interventions in healthcare settings

The 2023 rapid overview (search 2010-2023) of interventions in emergency departments or trauma units; mostly focused on alcohol.(41) The authors identified that alcohol brief interventions appear to be acceptable to patients in urgent or emergency care settings, but clinicians face barriers in delivering them. This was based on two reviews which looked at implementation-related outcomes and eleven (ten in alcohol) which reported information about implementation as well as effectiveness of interventions. Clinician-reported barriers for delivering interventions were based on one review. These included: resources (lack of time, screening tools and referral resources); discomfort about the implications of delivering the intervention on patient relationships; and lack of knowledge about brief interventions. One review identified that the professional delivering the interventions could be a factor in acceptance and retention of interventions, with lower rates where clinicians delivered the interventions than when research assistants did so.

In support of the “Making Every Contact Count” initiative Public Health England published a 2021 overview of brief interventions by healthcare professionals to promote positive behaviour change amongst their patients.(54) Five included systematic reviews examined barriers and facilitators to delivery in relation to alcohol. The reviews were judged to be good or very good quality. Seven domains of barriers and facilitators were identified as being most important. These were environmental context and resources; beliefs about the consequences of intervening/the intervention; skills; beliefs about their capability; social professional role and identity; knowledge; and emotions. Related barriers were identified for all of these; facilitators were identified for all except social professional role and identity and emotions. The work identified six nationally available behaviour change techniques (BCTs) targeting health professionals’ implementation of brief interventions. These were well-suited to address the domains identified here as were 5/10 of other identified BCTs. Those with the highest congruence with the domains identified from the literature were the NHS Health Check Guidance and Preventing Ill Health CQUIN. One intervention type which was missing from the national interventions but was considered highly relevant was environmental restructuring, which relates to the domain identified as most important to delivery (environmental context and resources).

A 2021 overview of opportunistic behaviour change interventions included alcohol reduction among the behaviours targeted.(55) The overview included 36 systematic reviews of varying quality, targeting a wide range of healthcare professionals. Only two of the included reviews related to alcohol but eight related to health promotion generally. Nevertheless the four themes identified as related to both barriers and facilitators align with some of the priority domains identified by the Public Health England overview: perceptions of the knowledge or skills needed to support behaviour change with patients; perceptions of healthcare professional role; beliefs about resources and support needed; own health behaviours. Three enablers were identified: training context; and attitudes towards delivering interventions. Four barriers were perceived lack of time; perceived lack of prioritisation; negative attitudes towards patients and perceptions of patient risk; perceptions of patient motivation.

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