Optimizing Delivery of Health Care Interventions (ODHIN)

Improving the delivery of brief advice for heavy drinking in primary health care – summary and implementation guide for policy makers

Deliverable 5.3, Work Package 5

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Summary

- To increase the volume of brief advice delivered in primary health care for heavy drinking, jurisdictions and commissioners of health services are advised to offer specific training to primary health care providers on dealing with heavy drinking and to consider providing financial reimbursement to primary health care providers for delivering screening and brief advice.
- During normal practice, primary health care providers in five European jurisdictions (Catalonia, England, Netherlands, Poland and Sweden) give advice to reduce heavy drinking to 11 per 1,000 adult consultations.
- Providing training and support to primary health care providers increases intervention rates[1] for heavy drinking, with an effect still present six months after the training.
- Providing financial reimbursement to primary health care providers increases intervention rates, but only for the time that reimbursement is offered.
- The offer of referral of identified patients to an internet-based method of delivering advice (e-BI) does not influence intervention rates.
- The combination of provision of training and support plus financial reimbursement increases intervention rates more than the provision of training and support and financial reimbursement alone, but only for the time that financial reimbursement is offered.
- The impact of training and support and of financial reimbursement is largely due to more patients being screened for heavy drinking.
- The provider mix in the PHCU (doctor, nurse, practice assistant), operationalized by the proportion of providers within a PHCU that were doctors, does not influence the impact of training and support and financial reimbursement.

Background

Alcohol consumption is a wholly or contributory cause for more than 200 diseases, injuries and other health conditions with ICD-10 codes.[1] For most diseases and injuries, there is a dose–response relationship with alcohol. Reduction in alcohol consumption is a key risk factor, whose reduction is essential to achieve global targets of reducing deaths from non-communicable diseases by 25% between 2010 and 2025.[2] There is a wealth of evidence that demonstrates the effectiveness[3-5] and cost-effectiveness[6,7]of screening and advice programmes to reduce alcohol consumption and alcohol-related mortality[8].

Many national and international guidelines recommend routine screening in primary health care (PHC) and the offer of advice to screen positive patients (e.g.[9, 10]). With strong government support for delivering advice, supported by financial and performance management arrangements, training and guidance, and strategic leadership, it is possible to increase the volume of advice delivered (e.g.[11]). However, in many jurisdictions there is a large gap between need and provision of advice. In the ODHIN study itself, whilst 11 per 1000 adult consultations resulted in a brief advice for heavy drinking being delivered, screen positives for heavy drinking were found in 330 per 1,000 adult consultations; this suggests that only about 1 in 30 patients attending primary health care facilities who would benefit from brief advice are actually receiving it.

[1]Intervention rate defined as the number of AUDIT-C positive patients that receive advice to drink less per adult consultation

Some of the reasons for the gap in delivering brief advice to those at risk have been identified and include: substantial lack of knowledge and training among primary health care providers; lack of adequate resources and support; negative attitudes; and, time constrains in terms of perceived workload and work pressure for screening and advice activities.[12]

In the ODHIN study, we set out to see if we could close this gap by delivering training and support to PHC providers, by giving financial reimbursement for screening and brief advice activity, and by offering the opportunity of referring screen positive patients to an internet-based method of delivering advice (e-BI). We chose the option of e-BI, since there is evidence for its impact in reducing alcohol consumption[13]; referral to e-BI might be helpful as an organizational-oriented strategy in reducing the workload of healthcare professionals after identification of patients at risk and thus might increase screening activity of primary health care providers.

Methodology of work

We recruited 24 primary health care units (PHCU) from each of Catalonia, England, the Netherlands, Poland and Sweden, 120 in all, with the study taking place between August 2012 and June 2014. Once the PHCU had agreed to take part in the trial, a 4-week baseline measurement period took place. After a 2-6 week gap, the PHCU entered a 12-week implementation period, with each PHCU randomly allocated to one of eight groups as follows:

1. *Control Group:* The control group were given a package containing a summary card of the national guideline recommendations for screening and advice for hazardous and harmful alcohol consumption, without demonstration.
2. *Training and support (TS):* In addition to receiving the same package as the control group, the TS group were offered two initial 1-2 hours face-to-face educational trainings, and one (10-30 minutes) telephone support call to the lead PHCU contact person during the 12-week implementation period. If necessary one additional face-to-face training of 1-2 hours duration was offered. The training addressed knowledge, skills, attitudes, and perceived barriers and facilitators in implementing screening and advice, combining theory and practical exercises. Each country used an adapted existing country-based TS package.
3. *Financial reimbursement (FR):* Financial reimbursement groups were paid for screening and advice activities, with rates based on existing country-specific financial reimbursement for clinical preventive activities. In Catalonia, a maximum ceiling payment of €250 per provider was established, and fees were calculated based on the average individual performance of the 12-week implementation period. A minimum rate had to be met in order to receive any payment, and above this rate, the amount increased proportionally up until the maximum of €250. In England, fees were €6 per screening and €25 per advice, with a maximum ceiling rate of €2200 per PHCU. In the Netherlands, fees were €9 per screening and €13.50 per advice, with a maximum ceiling rate of €1250 per provider unit. In Poland, fees were €1.25 per screening and €10 per advice, with no ceiling rate. In Sweden, fees were €2 per screening and €15 per advice with a maximum ceiling rate of €3300 per PHCU. The type of advice that was reimbursable differed by country. In Catalonia and the Netherlands, reimbursement was given for any of delivering oral advice; giving an advice leaflet; referring to the e-BI programme; or referral to another provider in or outside the PHCU. In Sweden, reimbursement was given for any of delivering oral advice; referring to the e-BI programme; or referral to another provider in or outside the PHCU.In England and Poland,

reimbursement was given for either delivering oral advice; or, referring to the e-BI programme.

4. *e-BI:* In addition to receiving the same package as the control group, the e-BI group were asked to refer identified at risk patients with an e-leaflet containing unique log in codes to an approved e-BI specific package, which was country specific. The website included: log in facility to allow monitoring of the patient (i.e. patient actually log-in); suitable brief screening tool with ability to calculate score and give feedback (i.e. intervention); appropriate information on sensible drinking guidelines; information on impact of alcohol on health and wellbeing; and a drink diary facility.
5. *TS and FR:* The TS and FR received the control group package, training and support, and the financial reimbursement as described above.
6. *TS and e-BI:* The TS and e-BI group received the control group package, training and support as above, and were asked to refer identified at risk patients to e-BI as above.
7. *FR and e-BI:* The FR and e-BI group received the control group package, were asked to refer identified at risk patients to e-BI, and received financial reimbursement as described above.
8. *TS, FR and e-BI:* The TS, FR and e-BI group received the control group package and training and support as above. They were asked to refer identified at risk patients to e-BI and received financial reimbursement as described above.

At the end of the 12-week implementation period, there was a six month gap before the final follow-up period; during the gap, no implementation strategies were delivered, apart from ensuring that each PHCU had sufficient e-BI referral leaflets.

PHCUs were asked to screen all adult patients (aged 18 years plus) for heavy drinking using AUDIT-C and to deliver brief alcohol advice of 5-15 minutes duration to screen positives. Screen positives were defined in Catalonia and England as men and women who scored ≥5 on AUDIT-C, and in Poland, Netherlands and Sweden as men who scored ≥5 and women who scored ≥4 on AUDIT-C.Providers who were allocated to e-BI activity were asked to refer screen positive patients to a computerized advice programme, taking a few minutes to explain why the patient ought to log on to the web site.

Screening and brief advice activity was measured at five time points: during the 4-week baseline period, during each of the three consecutive 4-week blocks during the 12-week implementation period, and during a 4-week follow-up period that commenced six months after the end of the 12-week implementation period, using paper tally sheets, with the exception of Catalonia, where electronic patient records were used. The tally sheets included AUDIT-C questions, AUDIT-C scores, and tick boxes to indicate the type of advice that was delivered.

For each of the measurement periods, the intervention rate was defined as the number of AUDIT-C positive patients that received one or more of oral advice, an advice leaflet, referral to the e-BI programme, or referral for advice to another provider in or outside the PHCU, divided by the total number of adult consultations per PHCU.

In analysing the results, we used a factorial design, so that we would have enough statistical power to detect small changes in a relatively small study (120 PHCU). A factorial design recognises that when evaluating the impact of, for example, training and support, we compare PHCU that received training and support with those that did not. Thus, the comparison also compares PHCU with training and support plus financial reimbursement versus PHCU with just financial reimbursement. The study also had what is called a hierarchical structure: PHCU within any one country are more

likely to be similar to each other than to PHCU in other countries. This hierarchical structure can affect the results of statistical tests, so we took this into account in our analyses.

Results

During the four week baseline period, 11.1 per 1,000 adult consultations per PHCU resulted in a brief advice being given to an at risk patient.

Figure 1 displays the intervention rates per 1,000 adult consultations for: practices that received 2-4 hours of training and support (TS+) for advising heavy drinking patients and for practices that did not (TS-); for practices that received modest financial reimbursement for screening and advising heavy drinking patients (FR+) and for practices that did not (FR-); and for practices that had the opportunity to refer identified heavy drinking patients to an internet-based advice programme (eBI+) and for practices that did not(eBI-).

Practices that received training and support had a 69% higher intervention rate during the 12-week implementation period than practices that did not receive training and support ($p<0.001$), and a 41% higher rate at 6-month follow-up ($p<0.05$). This was largely due to increases in screening rates. Practices that received financial reimbursement had a 125% higher intervention rate during the 12-week implementation period (when the financial reimbursement was available) than practices that did not receive financial reimbursement ($p<0.001$), largely due to increases in screening rates, but not a higher rate at 6-month follow-up. The offer of the e-BI programme did not influence the intervention rates.

Figure 1 Mean intervention rates for heavy drinking per 1,000 adult consultations with and without training and support (TS), financial reimbursement (FR) and opportunity to refer identified patients to internet-based advice (eBI) over the 12-week implementation period (weeks 1-12) and at the follow-up period, which occurred six months after the implementation period was completed.

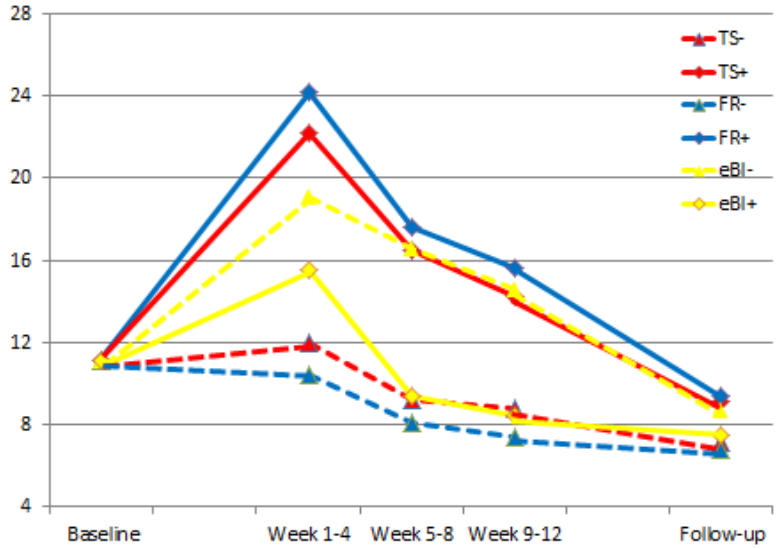
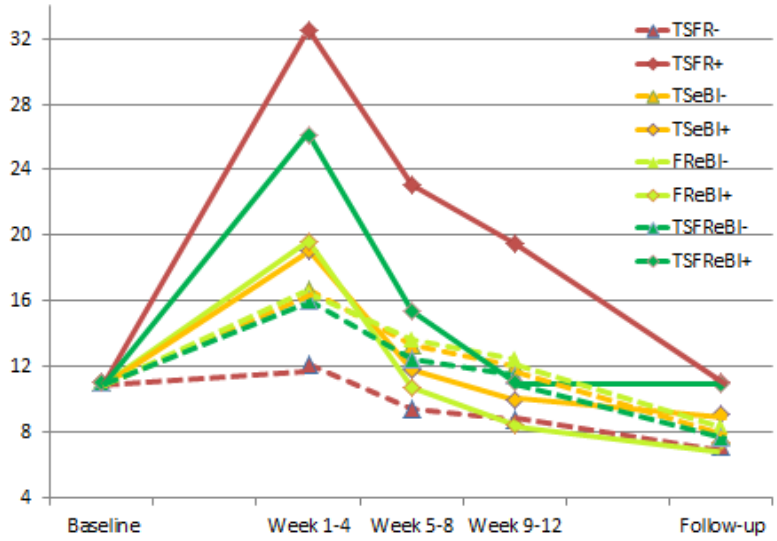


Figure 2 displays the intervention rates per 1,000 adult consultations forpractices that received a combination of the interventions in pairs or all three together compared with those that did not. Practices that received a combination of training and support plus financial reimbursement had a 280% higher intervention rate during the 12-week implementation period than practices that did not

receive the combination training and support (p<0.001), and an 80% higher rate at 6-month follow-up (p<0.05); the combination had a higher impact during the 12-week implementation period than either training and support (165% higher; p<0.001) or financial reimbursement (102% higher; p<0.001) alone. Practices that received all three interventions had a 144% higher intervention rate during the 12-week implementation period than practices that did not receive the combination of all three (p<0.01), an effect that was not present at 6-month follow-up.

Figure 2 Mean intervention rates for heavy drinking per 1,000 adult consultations with and without combinations of the interventions over the 12-week implementation period (weeks 1-12) and at the follow-up period, which occurred six months after the implementation period was completed.



The rates dropped off during the 12-week implementation period, more so between weeks 1-4 and weeks 5-9. We checked to see if just looking at the rates during weeks 9-12 (rather than all 12 weeks) influenced the findings; it did not.

We also checked to see if any characteristics of the providers (their profession, gender or age) or any characteristics of the patients (number of registered patients, adult consultation rate, age and gender of screened patients) influenced the findings; they did not.

Strengths of our study include its factorial design, which ensured that it had sufficient power to detect small changes with a relatively small number of PHCU (120), and its implementation across five different European jurisdictions, with differing health system financing and management structures. Weaknesses of our study include the record sheet used to measure AUDIT-C listed tick-box options for giving advice, in itself an organizational intervention to support provider behaviour, and that completion of the record sheet was made by the provider, with no independent check that advice was actually carried out.

Conclusions

Two to four hours of training and support leads to higher intervention rates during a 12-week implementation period, an effect that was partially maintained six months after the end of the implementation period.

Modest financial reimbursement is associated with higher intervention rates for the time of reimbursement, an effect that is not maintained when the financial reimbursement ceases.

The combination of training and support and financial reimbursement is far more effective in its association with higher intervention rates than either training and support or financial reimbursement alone.

The offer of being able to refer screen positive heavy drinkers to an internet-based brief advice programme does not lead to more patients being screened.

Characteristic of the providers and of the patients who consult them do not influence the impact of training and support or of financial reimbursement.

KEY RECOMMENDATIONS FOR SERVICE COMMISSIONERS AND POLICY MAKERS

- **Increase training and support**

Given the modesty of training and support (less than 4 hours face-to face training) and the finding that these increase implementation of screening and brief advice programmes, it would be expedient to offer training and support in screening and brief advice programmes for heavy drinking to all PHCU providers.

- **Further testing of financial reimbursement**

Financial reimbursement programmes to increase the volume of screening and brief advice activity should be further tested and refined, given the impact on intervention rates registered in the ODHIN trial during the period when providers were paid-per-performance. The findings of ODHIN suggest that, if financial reimbursement is to be introduced, it should always be combined with training and support initiatives.

- **E-BI programmes directly to drinkers**

The ODHIN results do not support offering e-BIs through primary health care providers. For the time being, it might be preferable to offer e-BI programmes directly to drinkers, whilst more studies are undertaken to explore how referral to e-BI could be better organized and implemented.

Practical advice for implementation based on the ODHIN RCT experience

The ODHIN RCT has not only provided new evidence on how to best enhance the uptake of screening and brief advice for heavy drinking by health professionals in primary health care settings, but has also been a great opportunity to deal with the practicalities of designing, fine-tuning and implementing these new interventions. ODHIN scientists faced the challenge of introducing training and support, financial reimbursement and e-BI in five different healthcare systems, tailored to the local particularities, but following a common core structure and content, also based international guidelines. We would therefore like to include here a compendium of what we consider practical lessons learnt through the ODHIN trial, based on our experienceorganising and carrying out these strategies in 120 primary health care units, involving approximately 750 health care providers. Some of these considerations may seem the obvious way forward, but our experience proved that, once we sat down to look at the detail of delivering the strategies,much talk and thought on different alternatives arose amongst and within the five country teams. Therefore, we consider this as useful information advising developers of future training and support, financial reimbursement or e-BI within programmes for heavy drinking. As training and support has proved to be the most effective intervention, the lion's share of the advice focuses on this strategy; nevertheless, we have included considerations also for financial reimbursement and e-BI, were they to be implemented.

ADVICE FOR IMPLEMENTING TRAINING AND SUPPORT ON DEALING WITH HEAVY DRINKING IN PRIMARY HEALTH CARE SETTINGS

Organizational aspects

- Schedule the face-to-facetraining sessions well in advance and taking into account the work schedules of providers. If possible, schedule with a PHCU contact person using one of the timeslots usually dedicated to staff training or meetings.
- Hold the training sessions in the PHCU premises, or as close a location as possible. This will save time and reduce the number of non-attenders.
- Group training sessions have proved to be effective and also offer the opportunity to share doubts and views with peers.
- Provide backup documentation (training manuals, illustrative videos, etc.) to all trainees, both for those unable to attend and as go-over material for those who did.
- Support via telephone is suggested to be offered between the two face-to-face sessions, with at least one contact person per PHCU attending.

T&S features

- Use professional qualified trainers familiarised with dealing with heavy drinking themselves.
- Use validated national training packages, but adapted to the local particularities.
- Pilot-test the training packages with trainers, as they will provide valuable feedback to fine-tune the content, and likely questions and answers can be identified.
- Training packages should combine theory and practice. The goal should not just be to get providers merely to experience training, but also to achieve a process by which the training is actively tried out in practice and reported back on (to see what works, helps, is useable, etc.).

- Training sessions and support are to address improving knowledge, skills and attitudes, and perceived barriers and facilitators for implementing SBI. We suggest the following contents, split into a minimum of two 1-2 hour sessions:
  - Knowledge (theoretical):
    - Prevalence of hazardous/harmful alcohol consumption and its consequences (e.g. disease, costs involved, etc.)
    - Background SBI / relevance of applying SBI activities
    - Available instruments/ methods for SBI
    - Protocol for delivering simple structured advice
    - Stages of behavioural changes[14] and its relationship to BI
  - Skills (role-play/ practice based situations)
    - The use of screening instruments
    - Process of linking screening to brief interventions
    - Brief Intervention methods
    - FRAMES[2] approach[15]
  - Attitudes (practice based situations)
    - Interests in managing alcohol issues
    - Open discussion or results of SAAPPQ[3] attitudes[16] can be used to start up the discussion.
      - Experiences of a supportive working environment (i.e. availability of necessary tools (e.g. screening instruments, counselling materials), support of peers or other organizations).
      - Role security/therapeutic commitment (i.e. confidence in SBI; motivated to apply SBI
      - Satisfaction (i.e. comfort with SBI)
  - Perceived barriers and facilitators
    - Open discussion of experienced barriers and facilitators
    - Tips and tricks: how can these barriers be solved?
    - Peer feedback: sharing lessons & experiences
    - Trainers: availability of necessary tools and materials
- Ensure the balance between scientific evidence/relevance and accessibility for the non-technical audience. Present key data justifying the importance of doing SBI for heavy drinking, but then show that actually doing SBI can be straightforward, by using a non-sophisticated vocabulary and providing real-life examples.
- If possible, use audiovisual material such as videos,as this is especially useful for learning how to respond in certain circumstances and deal with different reactions of the patients.
- It is important to encourage providers to share their experience with other colleagues, both face to face and via telephone support.
- A minimum training of 4 hours has proved to be effective in increasing intervention rates. However, we do not yet know if a more in-depth training would be even more effective or not. In light of this evidence, we could recommend a programme based on short training sessions with a wide reach, rather than more intensive training but for a smaller proportion of PHC providers.

[2]FRAMES: Structured and personalized Feedback on risk and harm; emphasis on the patient's personal Responsibility for change; clear Advice to the patient to make a change in drinking; a Menu of alternative strategies for making a change in behaviour; delivered in an Empathic and non-judgemental fashion; an attempt to increase the patient's confidence in being able to change behaviour ("Self-efficacy").
[3]SAAPPQ: Shortened Alcohol and Alcohol Problems Perception Questionnaire.

ADVICE FOR IMPLEMENTING FINANCIAL REIMBURSEMENTFOR DEALING WITH HEAVY DRINKING IN PRIMARY HEALTH CARE SETTINGS

- It is not necessary to offer large rewards. Small amounts have proved to be effective.
- The payment-per-performance should be designed based on the usual financial incentive models applied in each primary health care system.
- Clear instructions on how the financial reimbursement will be calculated and paid for should be given to all providers.
- Pilot test the incentive system, including data collection, data analysis and calculation of corresponding amounts. This will enable identifying and solving any possible data issues in due time.
- As a way to enhance each provider's accountability and motivate self-improvement, set up a monitoring system that will allow the performance rates to be registered and fed back to each provider on an individual basis.
- Offer financial reimbursement in combination with training and support, as to ensure the quality of the care delivered.

ADVICE FOR IMPLEMENTING E-BI FOR DEALING WITH HEAVY DRINKING IN PRIMARY HEALTH CARE SETTINGS

Although the findings of the ODHIN study suggest offering e-BI directly to citizens at this stage, rather than through their PHC providers, in future incorporation of e-BI into primary health care (PHC) settings, the following considerations could be taken into account:

- E-BI websites should be pilot-tested and adapted ensuring user-friendliness. One audience to pilot test the websites should be PHC providers themselves, as their input is relevant (if they don't like it, they won't refer patients to it!).
- E-BI should include compatible screening tests as those used in primary health care, and brief advice messages should be coherent with advice used in PHC.
- All providers who are to refer patients to e-BI should be familiarised with the website. In order to do so, they should be provided unique login codes, monitored, and reminded to log in and explore the website in case of not doing so.
- A helpline should be available to solve any doubts on the website content and functions.
- When patients enter the e-BI and create an account, they should receive reassuring messages insisting that all data is anonymous and not shared with health care providers (or anybody else), unless they give permission for this information to be shared, using a customizable and detailed permission-tool.

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