# Preoperative behavioural intervention to reduce drinking before elective orthopaedic surgery: the PRE-OP BIRDS feasibility RCT

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**Disclaimer:** This report contains transcripts of interviews conducted in the course of the research and contains language that may offend some readers.

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# Scientific summary

## The PRE-OP BIRDS feasibility RCT

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# Scientific summary

## Background

Increased preoperative alcohol consumption is associated with an increased risk of postoperative complications and extended length of hospital stay following surgery. Many of the physiological effects of alcohol consumption can be reduced or reversed within 2–7 weeks. As such, reducing alcohol consumption before surgery represents a modifiable target to improve postoperative outcomes. Previous evidence has identified a benefit of pharmacological interventions for alcohol cessation for dependent drinkers. However, aiming these interventions specifically at patients with preoperative alcohol dependency would have limited effect on outcomes, given that these patients represent only a small proportion of those at risk because of alcohol consumption.

By contrast, brief behavioural interventions have shown effectiveness in reducing alcohol consumption in the larger population of 'increased risk' and 'risky drinkers' in other health-care settings. These interventions may offer one method of addressing alcohol intake reduction in a significantly higher proportion of surgical patients, than concentrating on the alcohol dependent group, thereby increasing the possible impact on associated postoperative complications.

Our study aimed to investigate the feasibility and acceptability of a brief behavioural intervention to reduce alcohol consumption before surgery in patients being listed for elective orthopaedic surgery.

## Objectives

The primary objectives of the project were to:

1. investigate the feasibility of introducing a screening process to assess adult preoperative drinking levels and to deliver a brief behavioural intervention adapted for the target population group
2. conduct a two-arm (brief behavioural intervention plus standard preoperative care vs. standard preoperative care alone) multicentre, pilot randomised controlled trial to test processes that would be used in a definitive trial and, hence, assess the feasibility of proceeding to a definitive trial
3. conduct focus groups and a national web-based survey to establish current treatment as usual regarding alcohol screening and intervention in preoperative assessment.

Each aspect of the project (feasibility, pilot randomised controlled trial, characterising treatment as usual) had its own specific secondary objectives.

## Methods

This was a non-randomised feasibility study conducted at a single secondary care hospital site followed by a three-centre pilot randomised controlled trial.

The feasibility study commenced with a group training session that enabled health-care professionals employed in the preoperative assessment clinic to conduct screening and intervention. Following this, potential participants were approached in a surgical outpatient clinic and asked to complete the Alcohol Use Disorders Identification Test Consumption screening tool. Patients who screened eligible (Alcohol Use Disorders Identification Test Consumption score of $\geq 5$ and drinking six or more standard drinks on a single occasion at least weekly) were provided with a verbal introduction to the study; those who expressed interest were provided with a copy of the

patient information sheet and completed the expression of interest form giving their permission to be contacted further about the study. Research staff contacted patients by telephone or e-mail to confirm ongoing interest in the study and arrange intervention delivery. On the day of the preoperative assessment, patients were met by a member of the research team and completed the consent process before completing the full Alcohol Use Disorders Identification Test questionnaire. Those who scored ≥ 8, indicating that they were drinking at risky levels, received the brief behavioural intervention.

In the pilot randomised controlled trial, group training sessions covering the delivery of preoperative alcohol screening and brief intervention were provided to health-care professionals employed in the preoperative assessment clinic. Patients were initially approached either in a surgical outpatient clinic or by post and then by telephone and asked to complete Alcohol Use Disorders Identification Test Consumption screening. Patients who were screened as eligible (Alcohol Use Disorders Identification Test Consumption score of ≥ 5) were provided with a verbal introduction to the study. Those who expressed interest were given or sent a copy of the patient information sheet. Ongoing expression of interest was gauged after a minimum of 24 hours. Consent, randomisation, baseline assessment and, where appropriate, intervention were conducted in the preoperative assessment clinic. Patients were followed up at 1 week pre surgery (intervention group only), 1–3 days pre surgery, 3–5 days post surgery, 6 weeks post surgery and 6 months post intervention.

Patient and health-care professional participants had the option of participating in qualitative interviews about their experience of taking part in the trial.

In both the feasibility study and the pilot randomised controlled trial, intervention sessions were audio-recorded (when patients provided consent for this) and an assessment of the fidelity of delivery was carried out. Fidelity assessments employed a predefined standardised checklist of 18 behaviour change techniques.

Treatment as usual was characterised through focus groups ($n = 3$ groups) with health-care professionals involved in the surgical care pathway at the three sites included in the pilot randomised controlled trial ($n = 19$ participants) and a quantitative online survey of health-care professionals employed in preoperative assessment centres across the country.

## Results

The initial recruitment of eligible patients to the feasibility study was low but improved with amendments to optimise the screening and recruitment process. Fifteen patients and nine health-care professionals consented to participate in the feasibility study, with 13 patients and three health-care professionals going on to participate in qualitative interviews about their experience of being involved in the study. Interviews identified the optimised screening and intervention processes as broadly acceptable. However, patient participants rejected any categorisation of themselves as 'risky drinkers' and showed poor understanding of the term 'standard drink'. Interviews with health-care professionals also identified some barriers to intervention delivery, including not having adequate time available and the need for regular delivery of interventions in order to gain experience and familiarity with the process.

Recruitment to the pilot randomised controlled trial was 85% of target, with 34% of eligible patients recruited to the trial. The most frequent reason patients were found ineligible was negative Alcohol Use Disorders Identification Test Consumption screen. The most frequent reasons eligible patients declined participation were lack of interest and not having enough time.

Retention at 6 months post consent was very high (96% at 6-month follow-up) and was complemented by small numbers of missing data on the proposed primary outcome measure (Alcohol Use Disorders Identification Test).

Compliance with randomisation was high, with 32 of the 33 patient participants allocated to the intervention arm receiving the intervention. Fidelity of delivery improved between the feasibility study (40%) and the pilot trial (65.9%). The delivery of behaviour change techniques aimed at increasing motivation to change was more consistent than the delivery of volitionally focused ones.

The results of the survey and focus groups show that treatment as usual relating to alcohol screening, availability of advice and availability of referral varies between individuals and sites, with few employing validated screening tools.

## Conclusions

Preoperative alcohol screening using the Alcohol Use Disorders Identification Test Consumption and full Alcohol Use Disorders Identification Test is acceptable to patients and health-care professionals. Similarly, delivering a brief behavioural intervention in the preoperative assessment clinic is possible, and the intervention methods adopted were acceptable to patients and health-care professionals. The evidence supports the feasibility of a definitive trial to assess the effectiveness of these methods in bringing about reductions in preoperative alcohol consumption and secondary outcomes of surgical complications.

## Trial registration

This trial is registered as ISRCTN36257982.

## Funding

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### This report

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