Screening and brief interventions for adolescent alcohol use disorders presenting through emergency departments: a research programme including two RCTs

Paolo Deluca,1* Simon Coulton,2 Mohammed Fasihul Alam,3 Sadie Boniface,1 Kim Donoghue,1 Eilish Gilvarry,4,5 Eileen Kaner,5 Ellen Lynch,5 Ian Maconochie,6 Paul McArdle,4 Ruth McGovern,5 Dorothy Newbury-Birch,7 Robert Patton,8 Tracy Pellatt-Higgins,2 Ceri Phillips,9 Thomas Phillips,1,10 Rhys Pickett,9 Ian T Russell,11 John Strang1,12 and Colin Drummond1,12†

1Addictions Department, National Addiction Centre, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK
2Centre for Health Services Studies, University of Kent, Canterbury, UK
3Department of Public Health, College of Health Sciences, Qatar University, Qatar
4Northumberland Tyne and Wear NHS Foundation Trust, Newcastle upon Tyne, UK
5Institute of Health and Society, Newcastle University, Newcastle upon Tyne, UK
6Paediatric Emergency Medicine, Imperial College London, London, UK
7School of Health and Social Care, Teesside University, Middlesbrough, UK
8School of Psychology, University of Surrey, Guildford, UK
9Swansea Centre for Health Economics, College of Human and Health Sciences, Swansea University, Swansea, UK
10Institute for Clinical and Applied Health Research, University of Hull, Hull, UK
11Medical School, Swansea University, Swansea, UK
12South London and Maudsley NHS Foundation Trust, London, UK

*Corresponding author paolo.deluca@kcl.ac.uk
†Chief investigator and senior author

Declared competing interests of authors: Paolo Deluca acknowledges past and current research funding from the National Institute for Health Research (NIHR), the Medical Research Council (MRC) and the European Commission. Paolo Deluca is also supported by South London and Maudsley NHS Foundation Trust (SlAM) and by the NIHR Biomedical Research Centre (BRC) for Mental Health at King’s College London and SlAM. Simon Coulton acknowledges past and current research funding as chief investigator and co-investigator from NIHR, Alcohol Research UK, Dunhill Medical Trust, MRC, Lundbeck Ltd (St Albans, UK) and Kent County Council. Mohammed Fasihul Alam acknowledges past and current research funding from
Qatar University Internal Grant, NIHR and Community Pharmacy Wales. Kim Donoghue acknowledges past and current research funding from NIHR. Eilish Gilvarry acknowledges grants from NIHR during the conduct of the study. Eileen Kaner is a senior scientist in the NIHR School of Primary Care Research and NIHR School of Public Health Research as part of Fuse, a UK Clinical Research Collaboration (UKCRC) Centre of Excellence in Translation Public Health Research. Eileen Kaner also acknowledges past and current research funding as chief investigator and co-investigator from NIHR, the MRC Public Health Intervention Development Scheme (PHIND), the Department of Health and Social Care, The British Academy, Public Health England, European Research Area Network on Illicit Drugs (ERANID), Policing Research Partnership, North Yorkshire County Council, the Institute of Local Governance, Alcohol Research UK, MRC, the European Commission, Sunderland Clinical Commissioning Group (CCG), the Health Foundation, Research Capability Funding, Diabetes UK and Newcastle upon Tyne Hospitals NHS Foundation Trust. Ian Maconochie acknowledges grants from NIHR during the conduct of the study. Paul McArdle reports grants from NIHR during the conduct of the study. Ruth McGovern acknowledges past and current research from NIHR, Public Health England, North East and North Cumbria, North Yorkshire County Council, ERANID, the Department of Health and Social Care, the Institute of Local Governance, N8 Policing Research Partnership, Alcohol Research UK, The Children’s Society, Mental Health Research Network – North East Hub and Sunderland CCG. Dorothy Newbury-Birch acknowledges past and current research funding from Public Health England, North Yorkshire County Council, Healso, Alcohol Research UK, County Durham and Darlington NHS Foundation Trust, The Children’s Foundation, NIHR, MRC PHIND, Forces in Mind Trust, the Joseph Rowntree Foundation, The Children’s Society, the European Commission, British Skin Foundation Small Grant and Newcastle upon Tyne Hospitals NHS Foundation Trust. Ian T Russell acknowledges grants from NIHR during the conduct of the study and personal fees from Swansea University outside the submitted work. John Strang reports grants and other funding from Martindale Pharma (Ashton Gate, UK), grants and other funding from Mundipharma (Cambridge, UK), and grants and other funding from Braeburn (Plymouth Meeting, PA, USA) outside the submitted work. In addition, John Strang has a patent Euro-Celtique issued and a patent King’s College London pending, is supported by the NIHR Biomedical Research Centre for Mental Health at South London and Maudsley NHS Foundation Trust and King’s College London, and is in receipt of a NIHR Senior Investigator Award. He has also worked with a range of governmental and non-governmental organisations and with pharmaceutical companies to seek to identify new or improved treatments from which he and his employer (King’s College London) have received honoraria, travel costs and/or consultancy payments. This includes work with, during the past 3 years, Mundipharma and Braeburn/Medpace (Cincinnati, OH, USA) and trial medication supply from iGen Networks Corp. (Las Vegas, NV, USA) (iGen/Astral-Cipan, Castanheira do Ribatejo, Portugal). His employer, King’s College London, has registered intellectual property on a novel buccal naloxone formulation, and he has also been named in a patent registration by a pharmaceutical company as inventor of a concentrated nasal naloxone spray. John Strang also acknowledges past and current research funding as chief investigator and co-investigator from NIHR, Mundipharma, MRC, The Pilgrim Trust, Martindale Pharma, the Alcohol and Education Research Council, the Institute of Social Psychiatry and the University of London Central Research Fund. Colin Drummond is partly funded by the NIHR Biomedical Research Centre for Mental Health at SLaM and King’s College London, and partly funded by the NIHR Collaborations for Leadership in Applied Health Research and Care South London at King’s College Hospital NHS Foundation Trust. In addition, Colin Drummond is in receipt of a NIHR Senior Investigator Award. Colin Drummond acknowledges past and current research funding as chief investigator and co-investigator from NIHR, MRC, Guy’s and St Thomas’ Charity, Nuffield Foundation, European Union Directorate-General for Justice and Consumers (JUST), Alcohol Research UK, NHS England, the Department of Health Policy Research Programme, World Health Organization, the European Commission and the Alcohol Education and Research Council.
Plain English summary

SBIs for adolescent alcohol use disorders
Programme Grants for Applied Research 2020; Vol. 8: No. 2
DOI: 10.3310/pgfar08020

NIHR Journals Library www.journalslibrary.nihr.ac.uk
Plain English summary

Adolescents in the UK are among the heaviest-drinking adolescents in Europe. Drinking in adolescence is associated with alcohol-related harms, and early drinking is linked to intellectual impairment and more serious alcohol problems later on in life.

This research was conducted in three stages and targeted adolescents presenting to emergency departments to identify the size of the problem and develop and evaluate age-appropriate interventions.

First, we surveyed 5000 adolescents attending emergency departments, 40% of whom had drunk more than a sip of alcohol in their lifetime. Drinking earlier was linked to poorer health, and to alcohol and social problems. We found that a short questionnaire can identify adolescents who are drinking at risky levels.

Second, we reviewed published research and developed interventions. We met adolescents and parents to design the third stage of our research.

We then did two studies: (1) a study among adolescents drinking little who were aiming to delay starting drinking and (2) a study among adolescents drinking more who were aiming to reduce their consumption. Participants were allocated to one of three groups by chance: (1) screening only and care as usual, (2) feedback and brief alcohol advice, and (3) feedback and an application program with alcohol advice.

We successfully ran both studies and exceeded targets for recruitment and follow-up. However, we found that neither of our interventions was effective in reducing alcohol consumption in adolescents drinking high quantities of alcohol, or in delaying drinking in those drinking less or not drinking, compared with screening alone. Moreover, these interventions did not represent value for money compared with screening alone.

We later interviewed adolescents in the studies to explore their understanding and experience of taking part. Adolescents felt that they should know more about the risks of alcohol, that the advice was helpful and that emergency departments were a useful setting.
Programme Grants for Applied Research

ISSN 2050-4322 (Print)
ISSN 2050-4330 (Online)

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nihr.ac.uk

The full PGfAR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/pgfar. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

Criteria for inclusion in the Programme Grants for Applied Research journal

Reports are published in Programme Grants for Applied Research (PGfAR) if (1) they have resulted from work for the PGfAR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Programme Grants for Applied Research programme

The Programme Grants for Applied Research (PGfAR) programme, part of the National Institute for Health Research (NIHR), was set up in 2006 to produce independent research findings that will have practical application for the benefit of patients and the NHS in the relatively near future. The Programme is managed by the NIHR Central Commissioning Facility (CCF) with strategic input from the Programme Director.

The programme is a national response mode funding scheme that aims to provide evidence to improve health outcomes in England through promotion of health, prevention of ill health, and optimal disease management (including safety and quality), with particular emphasis on conditions causing significant disease burden.

For more information about the PGfAR programme please visit the website: http://www.nihr.ac.uk/funding/programme-grants-for-applied-research.htm

This report

The research reported in this issue of the journal was funded by PGfAR as project number RP-PG-0609-10162. The contractual start date was in June 2011. The final report began editorial review in June 2017 and was accepted for publication in February 2019. As the funder, the PGfAR programme agreed the research questions and study designs in advance with the investigators. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The PGfAR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, CCF, NETSCC, PGfAR or the Department of Health and Social Care. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the PGfAR programme or the Department of Health and Social Care.

© Queen's Printer and Controller of HMSO 2020. This work was produced by Deluca et al. under the terms of a commissioning contract issued by the Secretary of State for Health and Social Care. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).
NIHR Journals Library Editor-in-Chief

Professor Ken Stein  Professor of Public Health, University of Exeter Medical School, UK

NIHR Journals Library Editors

Professor John Powell  Chair of HTA and EME Editorial Board and Editor-in-Chief of HTA and EME journals. Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK, and Senior Clinical Researcher, Nuffield Department of Primary Care Health Sciences, University of Oxford, UK

Professor Andrée Le May  Chair of NIHR Journals Library Editorial Group (HS&DR, PGfAR, PHR journals) and Editor-in-Chief of HS&DR, PGfAR, PHR journals

Professor Matthias Beck  Professor of Management, Cork University Business School, Department of Management and Marketing, University College Cork, Ireland

Dr Tessa Crilly  Director, Crystal Blue Consulting Ltd, UK

Dr Eugenia Cronin  Senior Scientific Advisor, Wessex Institute, UK

Dr Peter Davidson  Consultant Advisor, Wessex Institute, University of Southampton, UK

Ms Tara Lamont  Director, NIHR Dissemination Centre, UK

Dr Catriona McDaid  Senior Research Fellow, York Trials Unit, Department of Health Sciences, University of York, UK

Professor William McGuire  Professor of Child Health, Hull York Medical School, University of York, UK

Professor Geoffrey Meads  Professor of Wellbeing Research, University of Winchester, UK

Professor John Norrie  Chair in Medical Statistics, University of Edinburgh, UK

Professor James Raftery  Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma  Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts  Professor of Child Health Research, UCL Great Ormond Street Institute of Child Health, UK

Professor Jonathan Ross  Professor of Sexual Health and HIV, University Hospital Birmingham, UK

Professor Helen Snooks  Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

Professor Ken Stein  Professor of Public Health, University of Exeter Medical School, UK

Professor Jim Thornton  Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

Professor Martin Underwood  Warwick Clinical Trials Unit, Warwick Medical School, University of Warwick, UK

Please visit the website for a list of editors: www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: journals.library@nihr.ac.uk