The clinical effectiveness of individual behaviour change interventions to reduce risky sexual behaviour after a negative human immunodeficiency virus test in men who have sex with men: systematic and realist reviews and intervention development

Paul Flowers,1* Olivia Wu,2 Karen Lorimer,3 Bipasha Ahmed,4 Hannah Hesselgreaves,2 Jennifer MacDonald,3 Sandi Cayless,1 Sharon Hutchinson,1 Lawrie Elliott,3 Ann Sullivan,5 Dan Clutterbuck,6 Michael Rayment5 and Lisa McDaid7

1Department of Psychology, Social Work and Allied Health Sciences, Glasgow Caledonian University, Glasgow, UK
2Health Economics and Health Technology Assessment and National Institute for Health Research Complex Reviews Support Unit, University of Glasgow, Glasgow, UK
3Department of Nursing and Community Health, Glasgow Caledonian University, Glasgow, UK
4GCU London, Glasgow Caledonian University, London, UK
5Chelsea and Westminster Hospital NHS Foundation Trust, London, UK
6Chalmers Sexual Health Centre, NHS Lothian, Edinburgh, UK
7Chief Scientist Office/Medical Research Council Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK

*Corresponding author

Declared competing interests of authors: none

Published January 2017
DOI: 10.3310/hta21050
Plain English summary

Interventions to reduce risky sexual behaviour after a negative HIV test
Health Technology Assessment 2017; Vol. 21: No. 5
DOI: 10.3310/hta21050

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

The problem

There is a lack of guidance regarding human immunodeficiency virus (HIV) infection prevention in the UK. When guidance does exist, it is quite general. It does not provide detail about particular interventions that can change risky sexual behaviour among men who have sex with men (MSM).

How we addressed the problem

We looked at published scientific studies that described interventions for MSM and were designed to change sexual risk-related behaviour (e.g. increase condom use) after receiving a negative result from a HIV infection test. We wanted to know if these behaviour change interventions actually worked. We also wanted to know how they worked and why.

What we found

We found that these interventions improved sexual risk-related behaviour. It was more difficult to understand how and why they worked, but it was possible to set out the key components of these interventions. These key components included delivering interventions face to face immediately after HIV infection testing, supporting men in thinking through the consequences of their behaviour and identifying their future sexual health goals and encouraging them to identify solutions to the problems they perceive in realising these goals.

Is it possible to implement such an intervention in the UK?

We consulted experts who work in sexual health in the UK. Overall, they thought that the intervention we developed was acceptable and that it could help them. Although the findings of the report are very useful, they are based on rather old studies that were conducted outside the UK. We believe that UK research is needed to make sure that behaviour change interventions are as effective and relevant as they can be.
Criteria for inclusion in the Health Technology Assessment journal

Reports are published in Health Technology Assessment (HTA) if (1) they have resulted from work for the HTA programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in Health Technology Assessment are termed ‘systematic’ when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

HTA programme

The HTA programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS.

‘Health technologies’ are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

For more information about the HTA programme please visit the website: http://www.nets.nihr.ac.uk/programmes/hta

This report

The research reported in this issue of the journal was funded by the HTA programme as project number 13/77/03. The contractual start date was in August 2014. The draft report began editorial review in August 2015 and was accepted for publication in May 2016. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors’ report and would like to thank the reviewers for their constructive comments on the draft 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, NETSCC, the HTA programme or the Department of Health. 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 HTA programme or the Department of Health.

© Queen’s Printer and Controller of HMSO 2017. This work was produced by Flowers et al. under the terms of a commissioning contract issued by the Secretary of State for Health. 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).
**Health Technology Assessment Editor-in-Chief**

**Professor Hywel Williams**   Director, HTA Programme, UK and Foundation Professor and Co-Director of the Centre of Evidence-Based Dermatology, University of Nottingham, UK

**NIHR Journals Library Editor-in-Chief**

**Professor Tom Walley**   Director, NIHR Evaluation, Trials and Studies and Director of the EME Programme, UK

**NIHR Journals Library Editors**

**Professor Ken Stein**   Chair of HTA Editorial Board and Professor of Public Health, University of Exeter Medical School, UK

**Professor Andree Le May**   Chair of NIHR Journals Library Editorial Group (EME, HS&DR, PGfAR, PHR journals)

**Dr Martin Ashton-Key**   Consultant in Public Health Medicine/Consultant Advisor, NETSCC, UK

**Professor Matthias Beck**   Chair in Public Sector Management and Subject Leader (Management Group), Queen’s University Management School, Queen’s University Belfast, UK

**Professor Aileen Clarke**   Professor of Public Health and Health Services Research, Warwick Medical School, University of Warwick, UK

**Dr Tessa Crilly**   Director, Crystal Blue Consulting Ltd, UK

**Dr Eugenia Cronin**   Senior Scientific Advisor, Wessex Institute, UK

**Ms Tara Lamont**   Scientific Advisor, NETSCC, UK

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

**Professor Geoffrey Meads**   Professor of Health Sciences Research, Health and Wellbeing Research Group, University of Winchester, UK

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

**Professor John Powell**   Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), 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 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 Jim Thornton**   Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

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

Please visit the website for a list of members of the NIHR Journals Library Board: www.journalslibrary.nihr.ac.uk/about/editors

**Editorial contact:** nihredit@southampton.ac.uk