

# A multifaceted intervention to reduce antimicrobial prescribing in care homes: a non-randomised feasibility study and process evaluation

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**Declared competing interests of authors:** Carmel Hughes is a member of the Health Services and Delivery Research Commissioned Panel. Mark Loeb has worked for the World Health Organization as a consultant to develop antibiotics for an essential list of medicines and algorithms for appropriate antibiotic use. Martin Underwood is a member of National Institute for Health Research (NIHR) Journals Library Editors Group. He was chairperson of the National Institute for Health and Care Excellence accreditation advisory committee from 2013 until March 2017, for which he received a fee. He is chief investigator or co-investigator on multiple previous and current research grants from NIHR and Arthritis Research UK and is a co-investigator on grants funded by Arthritis Australia, Australian National Health and the Medical Research Council. He has received travel expenses for speaking at conferences from the professional organisations hosting the conferences. He is a director and shareholder of Clinvivo Ltd (Tenterden, UK), which provides electronic data collection for health services research. He is part of an academic partnership with Serco Ltd (Hook, UK) related to return-to-work initiatives. He is an editor of the NIHR journal series, for which he receives a fee. He has accepted an honorarium for advice on Research Excellence Framework submission from Queen Mary University of London. He is co-investigator on an Efficacy and Mechanism Evaluation grant, receiving support in kind from Orthospace Ltd (Caesarea, Israel).

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## Plain English summary

### Intervention to reduce antimicrobial prescribing in care homes

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## Plain English summary

There have been concerns about the levels of prescribing of drugs that kill bacteria (sometimes called antimicrobials or antibiotics) in care homes for older people. A Canadian study found that using a tool to help staff decision-making on how to best manage a resident with an infection, together with an education and training programme, was useful in reducing antibiotic prescribing in Canadian care homes. This study is based on this work. Six care homes were recruited to the study: three in Northern Ireland and three in the West Midlands, England. The most up-to-date research on how to manage infections in care home residents was read. The Canadian tool to help decision-making was then amended so that it would be suitable for UK care homes. Care home staff, family members of residents and general practitioners were asked what they thought about the tool. A training programme was developed and care home staff were trained on how to use the tool. The tool was then tested in the six care homes for 6 months to ensure that it was practical and feasible to use. Information was collected about the numbers and types of antimicrobials that were prescribed for care home residents and staff were asked what they thought about the training and the tool. A survey was carried out with care home managers to find out if they would be interested in taking part in a larger study. Staff enjoyed the training and used the tool with residents, but they were concerned about the amount of paperwork required for the study. As this was a small study, it is uncertain if it had an effect on the prescribing of antimicrobials, so a larger study is being considered, and the survey results suggest that care home managers will be interested in this.



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