

TARGET Workshops Resources Improved Antibiotic Dispensing in Primary Care

Introduction

The 'Treat Antibiotics Responsibly, Guidance, Education, Tools' (TARGET) antibiotics toolkit developed by Public Health England (PHE) with the Royal College of General Practitioners (RCGP) and other professional societies aims to influence prescribers' and patients' personal attitudes, social norms and perceived barriers to responsible antibiotic prescribing.

Aim

To determine the effect of the TARGET 1 h outreach workshop facilitated by existing UK NHS healthcare staff with promotion of TARGET website resources, on general practice (GP) antibiotic dispensing within routine NHS service provision.

Study Participants

General practices (n=166)

Nurses (n=51)

Other staff including receptionists, healthcare assistants and practice managers (n=101)

Methods

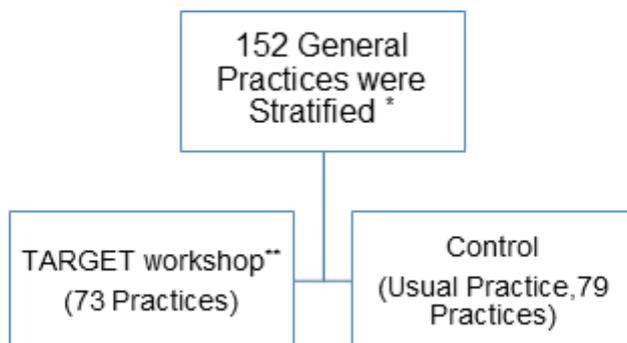
McNulty-Zelen-design randomized controlled trial

The workshop was designed to be delivered to all members of the primary healthcare team

Workshops were delivered by trained health professionals already involved locally in antimicrobial stewardship (AMS) (GP, microbiologist or medicines manager).

Local facilitators received 1 h of face-to-face or Skype training on the principles of the TARGET toolkit and workshop, and a toolkit pack with a video of the workshop presentation, together with TARGET materials.

▶ Study Design



*clinical commissioning group, antibiotic dispensing rate, and practice patient list size, then randomly allocated to

intervention

** incorporated a presentation, reflection on antibiotic data, promotion of patient and general practice (GP) staff resources, clinical scenarios and action planning

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Study Outcomes

► Primary Outcome

Total oral antibiotics dispensed (per 1000 practice patients, excluding anti-tuberculosis and minocycline) within intervention practices compared with controls in the year following the intervention.

► Secondary Outcome

Workshop uptake, dispensing of antibiotics typically prescribed for RTIs UTIs (nitrofurantoin, trimethoprim, and pivmecillinam) and broad-spectrum antibiotics (co-amoxiclav, quinolones, and cephalosporins).

Results

Thirty-six (51%) intervention practices accepted a TARGET workshop invitation

166 GPs, 51 nurses, and 101 other staff

In the ITT analysis,

Total antibiotic dispensing was 2.7% lower in intervention practices (P=0.06) compared with controls
Dispensing in intervention practices was 4.4% lower for amoxicillin/ ampicillin (P=0.02); 5.6% lower for trimethoprim (P=0.03); and a non-significant 7.1% higher for nitrofurantoin (P=0.06)

The Complier Average Causal Effect (CACE) analysis,

Impact in those that comply with assigned intervention, indicated 6.1% (P=0.04) lower total antibiotic dispensing in intervention practices and 11% (P=0.02) lower trimethoprim dispensing.

Table 1: Estimated DRR comparing intervention practices with controls from ITT and the CACE analyses

	ITT		CACE	
Oral antibiotics (excluding anti-TB and minocycline)	DRR	P-value	DRR	P-value
Total antibiotics	0.973	0.06	0.939	0.04
Usual respiratory tract infection antibiotics				
Phenoxymethylpenicillin	0.971	0.39	0.928	0.28
Amoxicillin/ampicillin	0.956	0.02	0.924	0.11
All tetracyclines	0.987	0.71	0.925	0.26
All macrolides	1.007	0.79	1.005	0.93

Usual urinary tract infection antibiotics				
Trimethoprim	0.944	0.03	0.890	0.02
Nitrofurantoin	1.071	0.06	1.116	0.14
Pivmecillinam	1.611	0.14	a	
All UTI only: trimethoprim, nitrofurantoin and pivmecillinam	0.988	0.58	0.964	0.35
Broad-spectrum antibiotics				
All: co-amoxiclav, quinolones and cephalosporins	0.986	0.65	0.967	0.61
Co-amoxiclav only	0.969	0.46	0.945	0.57
Quinolones only	1.037	0.44	1.043	0.69
Cephalosporins only	1.003	0.97	0.976	0.87

a= unable to converge to solution

Conclusion

Face-to-face TARGET AMS workshops, including reflection on antibiotic prescribing, guidance, clinical scenarios, strategies to improve prescribing, and demonstration of TARGET patient-facing resources, audits, and educational resources, improved antibiotic dispensing for infections in general practices

The authors suggested that TARGET antibiotic workshops can help improve antibiotic use, and therefore should be considered as part of any national antimicrobial stewardship initiatives

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