Multifaceted interventions to reduce antibiotic prescribing: lessons from *'ChAP' and 'GAPS'*

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Changing **A**ntibiotic **P**rescribing - *ChAP*

- Nested in ReCEnT Registrar Clinical Encounters in Training
- 1332 GP registrars
- Educational setting
- Intervention: online modules & F2F teaching
- Analysis of 189,000 self-recorded consultation data
- Successful reduction of AB prescribing for LRTI *(15.8%)*
- Compulsory part of training
- Grant from RACGP/TG Ltd

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General Practitioner Antimicrobial Stewardship Programme Study

GAPS

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- 27 GP practices in SEQ
- 110 GPs
- Real life practice setting
- Intervention: online modules & POC tools
- Analysis of PBS and MBS data
- Successful reduction of all AB prescribing *(approx. 3.8 prescriptions/GP/month)*
- Incentive CPD points & $1000
- Supported by DoH

The University Of Queensland AUSTRALIA

Bond University Faculty of Health Sciences & Medicine

QUT Queensland University of Technology Brisbane Australia

The interventions

Prescriber-focused

- Online modules
  - Background on AB use and AMR
  - Communication skills straining
- CRP testing at POC
- Delayed prescribing protocol
- Audit and feedback

Patient-focused

- Decision aids
- Waiting room poster
- Patient handout

1. Online modules

Based on GRACE-INTRO[#] and adapted for Australia for ChAP* study

- Background module – antibiotic use and resistance
- Communication module – "CHESTTS"
- (CRP)

CHESTTS

Gather Information

- **C**oncerns
- **H**istory and Examination
- **E**xpectations

Exchange Information

- **S**ymptoms
- **T**imelines
- **T**reatment

Check Information

- **S**umming up

[#]Little P et al. Effects of internet-based training on antibiotic prescribing rates for acute respiratory-tract infections: a multinational, cluster, randomised, factorial, controlled trial. Lancet. 2013;382(9899):1175-82.

*van Driel ML et al. Changing the Antibiotic Prescribing of general practice registrars: the ChAP study protocol for a prospective controlled study of a multimodal educational intervention. BMC Fam Pract 2016;17:67. DOI: 10.1186/s12875-016-0470-7.

2. CRP testing

- Only used in GAPS
- CRP machine on loan for 3 months
- 50 tests provided free of charge
- To be used as practice sees fit
- ‘QuickRead CRP kits’ (Orion Diagnostics)
- ABACUS ALS & GAPS coordinator trained practices
- Access to online training module

Little P et al. Effects of internet-based training on antibiotic prescribing rates for acute respiratory-tract infections: a multinational, cluster, randomised, factorial, controlled trial. Lancet. 2013;382(9899):1175-82.

Cals JW et al. Enhanced communication skills and C-reactive protein point-of-care testing for respiratory tract infection: 3.5-year follow-up of a cluster randomized trial. Ann Fam Med 2013;11(2):157-64.

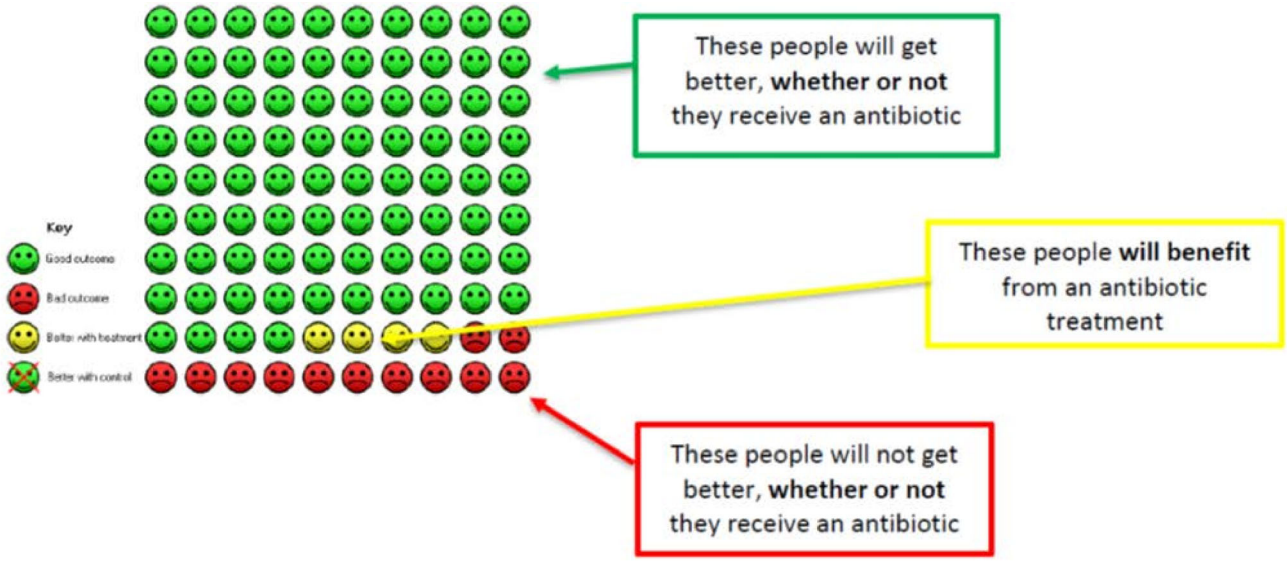
3. Delayed prescribing protocol

- Based on evidence of effectiveness in PHC*
- Significant reduction of AB use
- Addressed in online module
- Stickers to attach to script
- Script left at reception or given to patient

*Spurling GKP et al. Delayed antibiotics for respiratory infections. Cochrane Database of Systematic Reviews 2013, Issue 4. Art. No.: CD004417. DOI: 10.1002/14651858.CD004417.pub4.

4. Decision aids

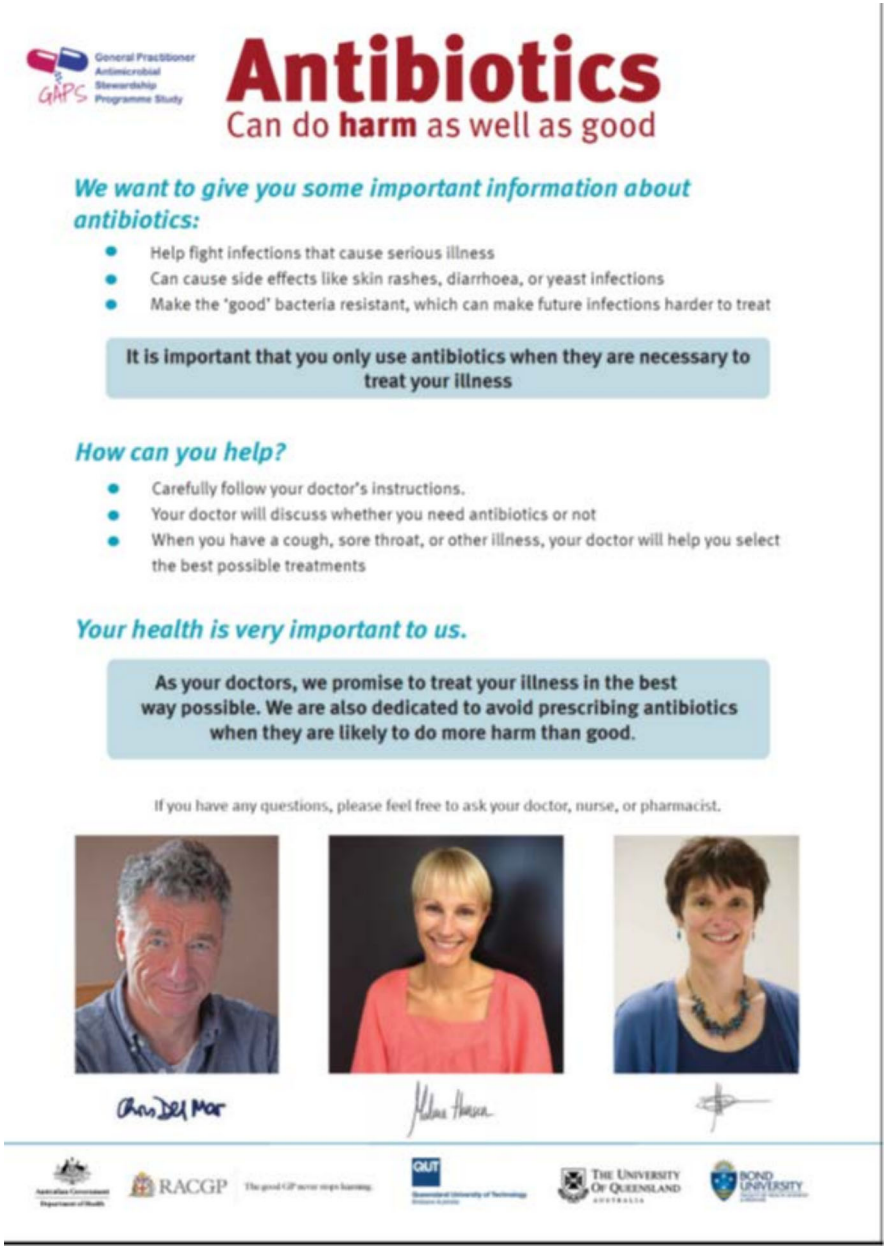
- ‘Cates plots’*
- Based on Cochrane reviews
  - *Acute sore throat*
  - *Acute rhinosinusitis*
  - *Acute otitis media*
  - *Acute bronchitis*



*http://www.nntonline.net/visualrx/cates_plot/

5. Waiting room poster

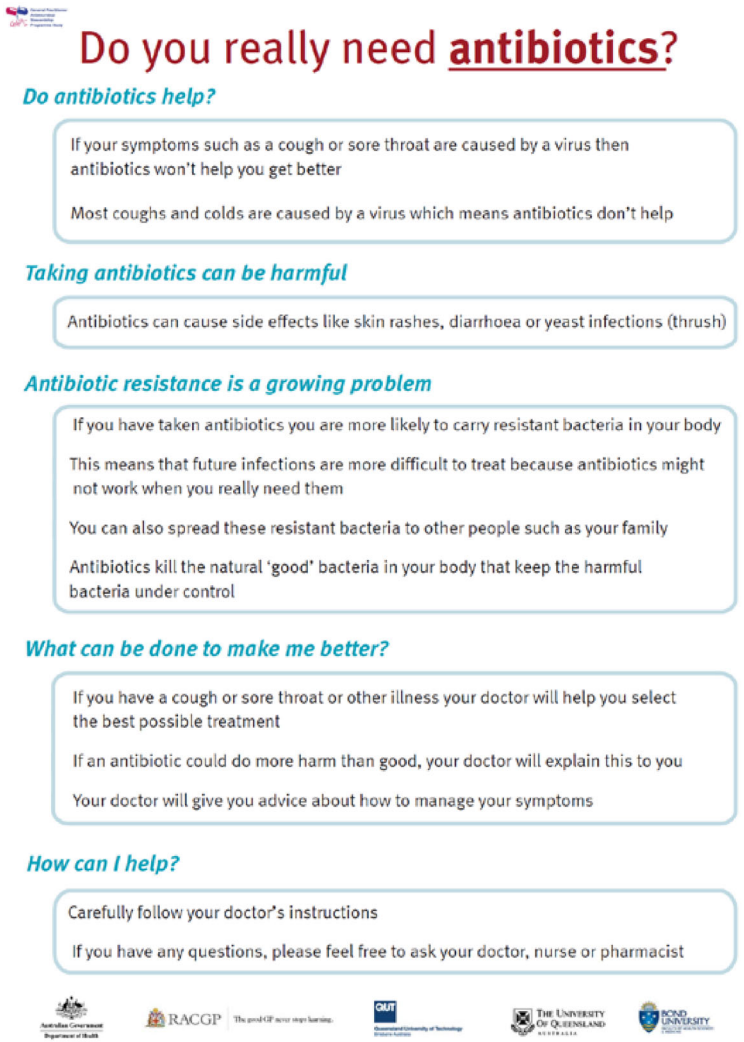
- ‘Behavioural nudge’
- GPs publicly pledge commitment to reducing *inappropriate* AB prescribing
- Personalised with photos of GPs in the practice



Meeker D et al. Nudging guideline-concordant antibiotic prescribing: a randomized clinical trial. JAMA Int Med 2014;174(3):425-31.

6. Patient handout

- Developed for GAPS
- NPS leaflet
- UK and GRACE-INTRO*



Do you really need **antibiotics**?

Do antibiotics help?

If your symptoms such as a cough or sore throat are caused by a virus then antibiotics won't help you get better

Most coughs and colds are caused by a virus which means antibiotics don't help

Taking antibiotics can be harmful

Antibiotics can cause side effects like skin rashes, diarrhoea or yeast infections (thrush)

Antibiotic resistance is a growing problem

If you have taken antibiotics you are more likely to carry resistant bacteria in your body

This means that future infections are more difficult to treat because antibiotics might not work when you really need them

You can also spread these resistant bacteria to other people such as your family

Antibiotics kill the natural 'good' bacteria in your body that keep the harmful bacteria under control

What can be done to make me better?

If you have a cough or sore throat or other illness your doctor will help you select the best possible treatment

If an antibiotic could do more harm than good, your doctor will explain this to you

Your doctor will give you advice about how to manage your symptoms

How can I help?

Carefully follow your doctor's instructions

If you have any questions, please feel free to ask your doctor, nurse or pharmacist

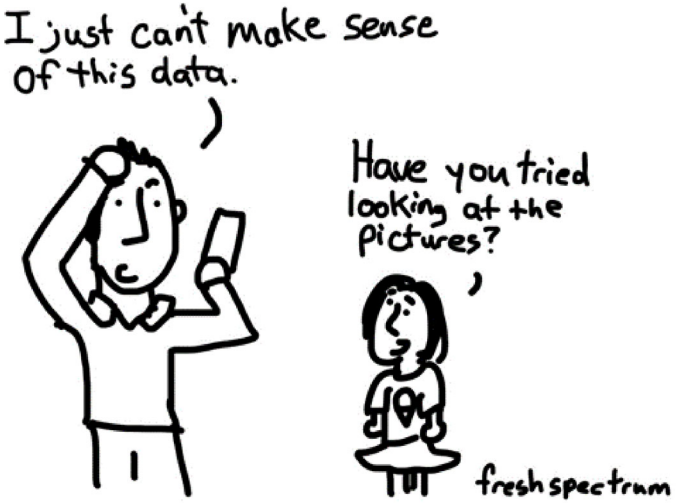
RACGP

*Francis N et al. Effect of using an interactive booklet about childhood respiratory tract infections in primary care consultations on reconsulting and antibiotic prescribing: a cluster randomised controlled trial. BMJ 2009;339:b2885 doi:10.1136/bmj.b2885.

Responses to the interventions

Interviews from ChAP and GAPS

- Uptake varied: GAPS – 50% CRP – 50% Online modules
- Helpful: *"I think it helped them to know that you are not just avoiding antibiotics, but that it actually … overall was better for them"*
- Choice is important
- Negative vs positive message: *"I would have appreciated some discussion about appropriate settings to give antibiotics."*
- Delayed prescribing: *"I am not really sure how the patient has the insight to recognise when to start the antibiotics."*
- Concerted action is needed: *"So the message that we have been giving in general practice is not being reinforced necessarily by our specialist colleagues […] they may be the ones who perpetuate the myth that an antibiotic will fix everything."*



Implications for Practice - Supporting implementation

- Ongoing education targeted at all stages of professional spectrum
- Concerted action across primary-secondary/tertiary care
- Evidence for a range of interventions:
  - More intensive interventions seem to work
  - But simple ones can work as well
  - Flexible delivery
- Facilitation?
- Reimbursement and incentives?
- AMS must be routine practice!

"What if we don't change at all ...
and something magical just happens?"