Exploring patients’ views of primary care consultations with contrasting interventions for acute cough: a six-country European qualitative study

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BACKGROUND: In a pan-European randomised controlled trial (GRACE INTRO) of two interventions, (i) a point-of-care C-reactive protein test and/or (ii) training in communication skills and use of an interactive patient booklet, both interventions resulted in large reductions in antibiotic prescribing for acute cough.

AIMS: This process evaluation explored patients’ views of primary care consultations using the two interventions in six European countries.

METHODS: Sixty-two interviews were conducted with patients who had participated in the GRACE INTRO trial. Interviews were transcribed verbatim and translated into English where necessary. Analysis used techniques from thematic and framework analysis.

RESULTS: Most patients were satisfied with their consultation despite many not receiving an antibiotic. Patients appeared to accept the use of both intervention approaches. A minority, but particularly in the trial arm with both interventions, reported that they would wait longer before consulting for cough in future.

CONCLUSIONS: Patients perceived that both interventions supported the general practitioner’s (GP’s) prescribing decisions by helping them understand when an antibiotic was, and was not, needed. Patients consulting with acute cough had largely positive views about the GP’s enhanced communication skills, which included understanding their concerns, and the use of a near-patient test as an additional investigation.

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INTRODUCTION

The management of respiratory tract infections (RTIs) in primary care is often discussed in relation to unnecessary antibiotic prescribing.1 In light of the association between antibiotic prescribing and resistance, many interventions have been trialled in order to promote more prudent antibiotic prescribing.

Interventions have been targeted at both general practitioners (GPs) and patients, with mixed results.2,3 Reviews have found that multi-component rather than single-component interventions lead to greater reductions in antibiotic prescribing and that interventions that contain an educational component are more effective.2,4,5 More recent studies have found that point-of-care tests and communication skills are components that can also meaningfully influence prescribing.6–9 Point-of-care testing for RTIs can help a GP to distinguish between infections that are likely to be self-limiting and those that may benefit from antibiotic treatment.6,7 Interventions that include communication skills training assist GPs in explaining a non-prescribing decision to patients in a way that is understandable and acceptable.6,9

While such interventions have been found to be effective in quantitative studies, qualitative methods are best suited to exploring the feasibility and acceptability of interventions from the perspectives of the intended users. Qualitative studies alongside trials are useful in exploring why an intervention was effective or not.10,11 Previous research has examined GPs’ views of interventions and their preferences between different types of intervention.12–14 Qualitative work with patients has most often focused on patients’ views of antibiotics and resistance in general.15,16 However, some studies have found that patients are usually happy to have point-of-care tests carried out and that parents of young children value booklets as a way of obtaining information when consulting for RTIs.17,18

This study forms part of a process evaluation of a randomised controlled trial (RCT). The GRACE INTRO (INternet TRaining for antibiotic use) trial was a large, multi-country factorial cluster RCT examining the effectiveness of two interventions aimed at decreasing GP antibiotic prescribing for acute cough.19 Use of online communication skills training together with an interactive patient booklet and a point-of-care C-reactive protein (CRP) test was evaluated in a 2 × 2 factorial design across six European countries. GPs were trained in the use of both interventions via a web-based program that was developed by piloting the
MATERIALS AND METHODS

This was a qualitative study with semi-structured interviews carried out with patients who participated in the intervention arms of the GRACE INTRO CTR. The GRACE INTRO CTR was trialled in six countries: Belgium, England, The Netherlands, Poland, Spain and Wales. These countries provided large variation in population (Northern, Eastern and Southern European), primary care access (same day versus slower), mechanism of payment (private, public, fee-for-service, capitation, incentives) and contextual factors (for example, in some countries a sick note from a doctor is required for any sickness absence). GPs recruited 4264 adult patients from 246 GP practices who had presented to primary care with acute cough when at least one of two interventions was used. In particular we aimed to explore any differences in patients' views between the intervention, translation and transcription made this impractical. 

The aim of this study was to explore patients' experiences of consulting a GP participating in the GRACE INTRO trial for an acute cough when at least one of two interventions was used. In particular we aimed to explore any differences in patients' views between the intervention, translation and transcription made this impractical. A qualitative study with GPs was carried out in tandem and is reported elsewhere (S Anthierens, S Tonkin-Crine, J Cals, S Coenen, L Yardley, L Brookes-Howell et al., personal communication).

RESULTS

Sixty-two patients were interviewed, with similar numbers recruited across intervention arms and countries (Table 1). Interviews lasted from 4 to 18 min, with a median of 10 min. Patient characteristics were similar between intervention arms (Table 2). Eighteen patients (29%) had received an antibiotic as a result of their initial consultation, 6 (9%) had received a delayed prescription and 38 (62%) had not received an antibiotic. Patients in the communication arm had received fewer prescriptions (Table 3). Five patients (12.5%) had not received a CRP test even though the doctor using their own discretion about whether or not it was needed. The remaining two cases, in the Netherlands, had had blood sent to a laboratory.

Three themes were identified that were relevant to all patients. Any differences identified between the views of patients in different intervention arms or from different countries are mentioned under each theme.

| Table 1. The numbers of patients recruited in each country and within each intervention arm |
|-----------------------------------------------|
| GP communication skills training and use of interactive booklet | Belgium | England | Netherlands | Poland | Spain | Wales | Total |
| GP training in use of CRP test | 4 | 3 | 4 | 4 | 4 | 3 | 22 |
| GP training in CRP test and communication skills training and use of interactive booklet | 3 | 3 | 4 | 4 | 4 | 4 | 20 |
| Total | 11 | 8 | 12 | 12 | 12 | 7 | 62 |

Abbreviations: CRP, C-reactive protein; GP, general practitioner.

Table 2. Patient characteristics across the three intervention arms

| Patient gender | Patient age |
|----------------|-------------|
| N (% female)   | Mean (years) | Range (years) |
| CRP training   | 10 (50%)    | 51.5          | 25–78   |
| Communication  | 13 (59%)    | 54.5          | 19–79   |
| and booklet    |             |               |         |
| Both interventions | 10 (50%) | 54.9          | 20–76   |
| All interviews | 33 (53%)    | 54            | 19–79   |

Abbreviation: CRP, C-reactive protein.
1. Theme 1: Patients’ reasons for consulting

All patients were keen to express their reason for consulting and reported that they had been very concerned about their cough. Patients made reference to losing sleep, having to cough all the time and worrying about a more serious infection. The duration of the cough was mentioned most often and many appeared to think a cough was unusual if it lasted more than a week, leading patients to believe they needed medical advice.

This was the first time I had such a severe cough... I usually never cough... [...] took pain killers but it did not help and after three days I decided to go to the doctor. (Netherlands, 6)

There was some indication that patients differed in how long they had been ill before they consulted. Patients from Poland visited their GP more quickly; in addition, some patients from Poland and Belgium mentioned needing a sick note from their GP for time off work, which may have contributed to consulting earlier. Patients from other countries reported that they had usually waited around a week to consult.

Some patients were keen to justify their reasons for consulting and wanted to emphasise that they had not gone to the GP ‘just like that’ (Netherlands, 2). While this was common for patients from the Netherlands, England and Spain, patients from Poland and Belgium did not mention this.

Lastly, some patients delayed consulting because they knew that their usual GP did not commonly prescribe antibiotics.

I waited a week because I know [doctor] is somebody who won’t prescribe antibiotics just like that. (Belgium, 2)

2. Theme 2: Patients’ perceptions of the GRACE INTRO consultation

The general consultation. Most patients reported that their GP had taken time to listen to their concerns, ask questions about their illness and had given them thorough explanations about what examinations they were going to perform.

[Doctor] explained to me in detail that it could be an inflammation, but it could also be bacterial. She didn’t know that yet... then said she was going to do all the tests... she did a good job. (Netherlands, 2)

A few patients commented that their consultation had been longer than usual. This had been a result of an extended physical examination, necessary for inclusion to the trial, and/or the interventions, either doing the CRP test or explaining additional information. CRP tests had taken longer when a nurse had done them outside of the consultation, most often in England, Wales and the Netherlands. Patients were pleased to have longer consultations when their doctor had discussed their symptoms with them, but were sometimes unhappy with the time that it took to be informed of their CRP test result.

The patient booklet. Not all patients who had been offered a booklet had taken it. Some patients had felt that their GP’s explanation was enough, were satisfied that their GP had acknowledged their concerns and were content that antibiotics were not required. Others said that they felt more confident when the booklet supported the treatment decision.

It is good that the doctor’s words were supported by this booklet; otherwise I could have mixed thoughts about the doctor’s suggestions. (Poland, 6)

Patients with the booklet reported that they had found it easy to read and that it had provided new knowledge, most often about the duration of cough. This helped to address patients’ pre-existing beliefs that they needed to consult a doctor after a week of being ill.

I know it is bronchitis and the cough can stay for three to four weeks. That is something I didn’t know [before]. (Netherlands, 7)

When a GP had not discussed the booklet in the consultation some patients had then not looked at it in their own time.

I think I threw it away... I didn’t keep it... if I didn’t read it then, what do I need it for? I am not going to read it later. (Spain, 10)

The CRP test. Patients appeared to be happy to have a CRP test carried out. Most described the test as something that could distinguish between a virus and bacteria, and/or indicate whether antibiotics were needed or not, better than the GP alone.

They did [the test] and said as long as it was below a certain number, it was a virus and it would be detrimental to me to take the antibiotics. If it was bad, then they would give them to me. (Wales, 5)

Comparing interventions. Patients who received both interventions stressed that the interventions were targeted to different needs.

I think you should do both, the test as well as the booklet. Because it reassures people. You don’t have to worry and that’s exactly what the booklet tells you. The test tells you there is not an infection. (Netherlands, 3)

Most patients did not have a preference between the interventions; however, those that did favoured the CRP test.

The treatment decision. Fifty-four patients (87%) said they were satisfied with their consultation regardless of the prescribing decision. Patients felt their doctor had made a correct decision.

| Table 3. The number of patients receiving an antibiotic prescription or delayed prescription in each intervention arm |
|---------------------------------------------------------------|
| **Antibiotic prescription** | **Delayed prescription** | **Any prescription** |
|-----------------------------|------------------------|-------------------|
| GP communication skills training and interactive booklet (n = 22) | 4 (18%) | 2 (10%) | 6 (27%) |
| GP training in use of CRP test (n = 20) | 7 (35%) | 1 (5%) | 8 (40%) |
| GP training in CRP+GP communication skills training and interactive booklet (n = 20) | 7 (35%) | 3 (15%) | 10 (50%) |
| Total | 18 | 6 | 24 |

Abbreviations: CRP, C-reactive protein; GP, general practitioner.
and had explained this decision clearly to them. Some patients
reported being surprised that antibiotics had not been needed
and that they had recovered without them.

Sometimes we think that if the doctor doesn’t prescribe an
antibiotic we are not going to get better and now I know it is
not like that.  
(Spain, 11)

While several had not been given antibiotics, many patients had
been prescribed some medication by their GP, which appeared to
have a protective effect against patients being unhappy with their
consultation. This had occurred in all countries except England
and Wales.

Five patients were unhappy with their consultation because
they had not been given antibiotics. These patients were from
England (2), Wales (2) and Poland (1), were older on average
(67 years) and were from all three intervention arms.

I’ve been back to the doctor again this week for the same
thing. I mean to my mind it’s purely a means to save money on
antibiotics.  
(Wales, 3)

3. Theme 3: Patients’ thoughts on future illness management
Several patients reported that they understood their illness better
after consulting their doctor and that they would not be as
concerned if they had a similar infection in the future. Twelve
patients reported that they planned to wait for longer before
consulting for a similar illness in the future. Many of these were in
the trial arm with both interventions.

I will wait even longer to go to the doctor because I know [the
cough] can last for longer without drawing the worst
conclusions.  
(Netherlands, 10)

Many patients reported that they would refer to the booklet in
the future to help guide their self-management of the illness and
may wait longer to consult as a result.

Five patients reported that they would re-consult for their next
illness specifically to have a CRP test performed again.

I think that if I have similar symptoms again I am going to go to
the consultation so that they give me the test again.  
(Spain, 1)

DISCUSSION
Main findings
While two-thirds of the patients in this study had not received an
antibiotic for their acute cough, the majority were happy with
their consultation. Those who had received a prescription for
antibiotics were satisfied they were needed and the majority of
those who did not receive a prescription for antibiotics under-
stood they were not necessary. In particular, patients who had
initially expected antibiotics reported learning that they were
unnecessary for their type of illness. Some patients reported
learning this from the explanation given by their GP alone, but
others reported that the booklet or CRP test had convinced them.
This suggests that an explanation from a GP may be sufficient for
some patients but that others may require additional evidence
from an ‘independent’ source.

Patients accepted the use of GRACE INTRO interventions in their
consultations. Many were pleased to be given a booklet that
provided new knowledge. Equally, patients were happy for a CRP
test to be used and most understood how this had contributed to
the treatment decision. Patients who received both interventions
emphasised that each had different uses and stated that they
would want both interventions again rather than one alone.

Strengths and limitations of this study
This study provides a valuable insight into patients’ perceptions of
primary-care consultations using new interventions. Additionally,
this study is unique as it sampled patients from different countries
with varied health contexts. There did not appear to be
differences in patient views of the interventions across countries
and this may help explain the similar reduction of antibiotic
prescribing between countries;19 however, the sampling of
participants between countries was restricted by the resources
in this study and sampling by intervention arm was prioritised.
Future qualitative cross-country studies are needed to further
examine differences in patients’ views.

Obtaining socially desirable responses, by participants giving
responses they think the researcher wants to hear or that they
think is the ‘correct’ response, is a risk in all qualitative research.
Here, all interviewers emphasised that they were independent
from the general practice surgery, were specifically looking for
views on how to improve consultations and that all responses
would be kept confidential.

The number of interviewers in the study was necessary because
of the multi-national context and the number of languages used
to interview patients. All interviewers followed the same interview
guide and provided minimal prompts. The translation of inter-
views from languages other than English may have led to a loss or
misinterpretation of data. To ensure this was kept to a minimum,
interview translations were checked by the original interviewer to
ensure accuracy.

Lastly, interviewing patients in the control arm of the INTRO trial
would have helped to distinguish between the views of the INTRO
consultation and the views of INTRO interventions and the
difference in patient satisfaction between arms. However, because
the main aim was to explore the views of the interventions, the
resources required to interview participants in the control arm
from each country was assessed as too costly for the anticipated
return.

Interpretations of findings in relation to previously published work
The majority of patients were satisfied with their consultation
because they were content that their GP had acknowledged their
concerns and had made the correct decision. Patients had been
convinced by the GP’s explanation and/or the CRP test result or
booklet. This supports previous research that indicates that open
and clear communication between patients and clinicians and
addressing patients’ concerns is likely to lead to greater patient
satisfaction.21,24

A minority of patients were unhappy with their consultation
because they had not received an antibiotic prescription. These
patients were older and may have had less knowledge about the
problems associated with antibiotic overuse. These patients were
seen most often in the communication and booklet arm of the
trial; however, the numbers were small. Quantitative data from a
survey of INTRO patients indicated that patients in the commu-
nication and booklet arm were more likely to be satisfied with the
consultation and these data provide a more representative view.25

Recent evidence has suggested that substantial proportions of
patients may expect antibiotics and hope to get them in
consultations.26,27 Nevertheless, it was encouraging that most
patients did not expect antibiotics for acute cough and this
supports previous findings that patients are now generally more
knowledgeable about the appropriate use of antibiotics.28

Some patients reported that they would still consult their GP in
the future within the first week of onset of a similar illness. For
patients in Poland and Belgium this would be necessary for taking time off work because self-certification would not be possible. For others, this indicated that some may not have fully appreciated the information about the duration of cough and that it may take more consultations for them to understand this. This fits in with findings that show that persisting concerns drive (re)consultations for cough. Although some patients indicated that they would re-consult with a future illness to receive the CRP test again, recent long-term outcomes of the first trial evaluating point-of-care CRP testing show that CRP does not medicalise by driving future consultations. However, the same study did show that patients exposed to a GP trained in communication skills were less likely to receive antibiotics for RTI during 3.5 years of follow-up.

Implications for future research, policy and practice

The results indicate that both the interactive booklet and CRP test are interventions that are acceptable to patients for use in consultations for acute cough. GPs are likely to need practice in using these interventions to ensure that they do not disrupt consultation times and that patients get the full benefit from them. Most patients received the booklet positively although information seemed to have been retained better when GPs had discussed the booklet interactively within the consultation. Some patients mentioned the length of time taken to do the CRP test, indicating that GPs were still getting used to the equipment. Alternative, simpler versions of such tests are now available, which are likely to be quicker and easier to incorporate in practice. There were differences between countries regarding whether the GP or nurse carried out the test, which indicated that some GPs had found their own way of incorporating testing into consultations. Overall the use of both interventions appeared to help GPs explain non-prescribing decisions to patients without negatively affecting patient satisfaction.

Conclusions

Patients were satisfied with consultations that provided self-management advice and reassurance but not antibiotics when consulting for acute cough. A patient booklet is an acceptable way to provide new information and advice to patients if it is discussed with a GP in the consultation. Patients prefer point-of-care CRP tests to assess whether they need antibiotics and are convinced by the results. The booklet provides information that can be referred to during a subsequent illness, and there were some indications that this, along with an explanation about self-limiting illness, may give patients the confidence to consult less.

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CONTRIBUTIONS

The GRACE INTRO study was conceived by PL, SC, CCB, HG and TJMV. HG led the funding application and provided overall coordination of the GRACE consortium. All authors contributed to the development of the protocol, and to the management of the study. ST-C, SA, CB, PF-V, JK and CL carried out interviews with patients. ST-C, SA, NAF and JWC were responsible for data analysis. All authors contributed to the interpretation of the data and the writing of the paper.

COMPETING INTERESTS

The authors declare no conflict of interest.

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