

Public perceptions about non-traditional primary care consultations, back-up prescriptions and point-of-care testing in respiratory tract infections

C4ME SUPPLEMENT

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Background

Respiratory tract infections (RTIs) account for a large proportion of primary care consultations and antibiotic prescriptions in the United Kingdom. Approximately one quarter of the population of England and Wales consult for RTI-related symptoms each year, with 60% of all primary care antibiotics being prescribed for these. (1)

The vast majority of RTIs are self-limiting viral infections, which do not necessarily require face-to-face GP advice or a week-long antibiotic prescription. Such high numbers of consultations increasingly place strain on general practitioners (GPs), who face increased workload and are driven away, resulting in a depleted workforce. (2, 3) Additionally, injudicious antibiotic use feeds the ever-expanding issue of antimicrobial resistance (AMR), which is a well-established threat to health and economies on a global scale. (4)

In order to address these problems, alternatives are needed. These include replacements for traditional GP consultations, such as pharmacist or electronic consultations, alongside novel techniques to reduce rates of prescribing, such as back-up prescriptions (BUPs) and point-of-care testing (POCT). The study we carried out was designed to explore the perceptions of members of the public regarding these interventions. We hope that the results we have obtained will be a valuable contribution to the existing literature on the topic.

Methods

The views of members of the public were collected using Health-Wise Wales (HWW), a national online cohort study. HWW consists of a combination of broad sociodemographic surveys and those pertaining to more specific areas of research, in our case the Caring for Coughs and Colds (CCC) module. The study sample was therefore composed of anyone aged 16 or over who was living in Wales who was subscribed to HWW and had completed the CCC module.

As our study aimed to link perceptions to behavior, data were also collected using the Secure Anonymised Information Linkage Databank (SAIL). Read codes were used to identify RTI-related consultations, antibiotic prescriptions and comorbidities, all of which were linked to HWW questionnaire responses on an individual level.

Data analysis was divided into descriptive and analytic phases. Public perceptions on drivers of consulting, perceptions of infection severity, alternatives to traditional consultations and value of the components of a consultation were described. Logistic regression was used in a univariable and multivariable model, implementing a forward stepwise approach for the latter. The aim was to identify associations between a pre-determined list of explanatory variables and specific public perceptions, including the acceptability of alternatives such as pharmacists or video consultations. We also looked at the factors associated with increased confidence in BUPs and POCT.

Results

90% of participants said they would only consult if they believed they had a serious infection, with over 75% driven to visit the GP if they thought they needed antibiotics. A fever of increasing duration was perceived to be the clearest indicator of a serious infection by members of the public. Receiving information and advice from a pharmacist was considered to be a favourable alternative to a traditional GP consultation by over 70% of the study cohort. Video consultations and email correspondence were less popular.

Perceptions of consulting frequency over-estimated consulting behaviour. 6.1% believed they would consult twice or more per year for the symptoms of an RTI, but only 0.4% did across the three-year period identified.

Women and adults without children were more likely to be in favour of visiting a local pharmacist as an alternative to their GP. Participants in the youngest age group were more likely to favour video consultations than those in the oldest. Men were more likely to want to be given a BUP and to be happy with POCT as part of a consultation.

Discussion

In our study, over 90% of participants said they would consult if they believed they had a serious infection. This differed from another similar study in England, in which 51% of participants contacted their GP out of fears of a serious infection. (5) Although perceptions over-estimate behaviour when it comes to consulting for RTIs in a community setting, there is still a significant burden which requires intervention.

Our findings complemented the literature for certain non-traditional consultation alternatives, where email correspondence and video communication have been shown to introduce challenges for both patients and doctors. (6, 7) This was particularly highlighted in the older population, as our study found they would be less willing to accept newer technological forms of seeking advice. It is interesting to see that face-to-face consultations are still favoured by many, although looking at the bigger picture it seems imperative that these alternatives gain momentum.

However, the confidence in pharmacists as alternative sources of advice is very promising. With the appropriate training in assessing RTIs, pharmacists can form an exceptionally valuable part of community management for these infections. 31.8% of participants said they would want a BUP, although 33.8% said they would not feel comfortable in taking one. Measures to increase confidence in BUPs and to educate patients on how to use them would be a useful area to direct further research into. 92.8% of participants said they would be happy with the finger-prick blood test, a form of POCT, as part of a consultation to help the GP determine need for antibiotics. Exploring the reasons why this is so widely seen as acceptable could help pave the way to increase uptake of BUPs.

Lessons Learnt

Description: This project was predominantly carried out to explore public attitudes on consulting, prescribing and non-traditional alternatives for the management of RTIs in the community. Tying our findings in with the existing literature can be helpful in furthering awareness about the available options from the perspective of members of the public.

Feelings: I thoroughly enjoyed working on this project and getting stuck into the large amounts of data during the analysis. It was rewarding to see some significant results emerge, and bring it all together in the hope of adding something of value to what currently exists in the literature.

Evaluation and Analysis: The main benefits of the study were the huge number of participants and the unique ability we had to link subjective questionnaire item responses to concrete behaviour within primary care records. The drawbacks included ambiguous wording of certain questionnaire items, leading to potential confusion for participant and analyst, and a limited three-year period of consulting and prescribing behaviour (2015–2017). As the data had already been collected previously, I think I would benefit in future from also being exposed to the data collection process.

Conclusion: Overall, I found this project interesting and exciting due to its unique design and exploration of novel ideas. There were certain areas that we could have targeted, in hindsight, to further boost the robustness of the results, such as gathering consulting/prescribing behaviour across a longer time period and cross-checking questionnaire items to ensure clarity. Ultimately it was a very useful project for me to undertake at this stage of my career, helping me gain a new transferrable skillset.

Action plan: I will certainly take the skills I have learnt during this project and implement them in any further research I carry out, whether it be related to the topic in question or not. It has given me a valuable insight into conducting research and it will be useful for future work.

References

1. National Institute for Health and Care Excellence. Respiratory Tract Infections - Antibiotic Prescribing: Prescribing of Antibiotics for Self-Limiting Respiratory Tract Infections in Adults and Children in Primary Care; 2008 [accessed 24 Oct 2019]. Available from: <https://www.nice.org.uk/guidance/cg69>.

2. Hobbs FDR, Bankhead C, Mukhtar T, Stevens S, Perera-Salazar R, Holt T, et al. Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007–14. *The Lancet*. 2016;387(10035):2323–30.

[https://doi.org/10.1016/S0140-6736\(16\)00620-6](https://doi.org/10.1016/S0140-6736(16)00620-6)

3. Department of Health and Social Care. GP Partnership Review: Final Report. 2019.

4. Cosgrove SE, Carmeli Y. The impact of antimicrobial resistance on health and economic outcomes. *Clinical Infectious Diseases*. 2003;36(11):1433–7.

<https://doi.org/10.1086/375081>
PMid:12766839

5. McNulty CAM, Nichols T, French DP, Joshi P, Butler CC. Expectations for consultations and antibiotics for respiratory tract infection in primary care: the RTI clinical iceberg. *Br J Gen Pract*. 2013;63(612) [accessed 24 Oct 2019]. Available from: <https://bjgp.org/content/63/612/e429.long>.

<https://doi.org/10.3399/bjgp13X669149>
PMid:23834879 PMCid:PMC3693799

6. Brant H, Atherton H, Ziebland S, McKinstry B, Campbell JL, Salisbury C. Using alternatives to face-to-face consultations: a survey of prevalence and attitudes in general practice. *Br J Gen Pract*. 2016;66(648) [accessed 24 Oct 2019]. Available from: <https://bjgp.org/content/66/648/e460.long>.

<https://doi.org/10.3399/bjgp16X685597>
PMid:27215571 PMCid:PMC4917048

7. Atherton H, Brant H, Ziebland S, Bikker A, Campbell J, Gibson A, et al. Alternatives to the face-to-face consultation in general practice: focused ethnographic case study. *Br J Gen Pract*. 2018;68(669) [accessed 24 Oct 2019]. Available from: <https://bjgp.org/content/68/669/e293>.

<https://doi.org/10.3399/bjgp18X694853>
PMid:29378697 PMCid:PMC5863684



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