PEER REVIEW HISTORY

This paper was submitted to a another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

(This paper received three reviews from its previous journal but only two reviewers agreed to published their review.)

ARTICLE DETAILS

TITLE (PROVISIONAL)	Management strategies for chronic rhinosinusitis: A qualitative study of GP and ENT specialist views of current practice in the UK.
AUTHORS	Vennik, Jane; Eyles, Caroline; Thomas, Mike; Hopkins, claire; Little, Paul; Blackshaw, Helen; Schilder, Anne; Boardman, Jim; Philpott, Carl

VERSION 1 – REVIEW

REVIEWER	Wytske Fokkens Dept of ORL AMC The Netherlnds performs similar studies in the Netherlands
REVIEW RETURNED	15-May-2018

GENERAL COMMENTS	This is a very interesting study describing what we "all know" but now well substantiated. I only have some minor comments: It is not totally clear to me how the GP and ENT were purposefully chosen. Maybe an exact description of inclusion/exclusion criteria would help It is also not totally clear to me what the training status of the interviewers is. Is the first author MD? PhD (I presume yes seeing dr. but probably not so clear to non Dutch). Psychologist? Any knowledge on CRS? Can the authors explain what local prescribing restrictions mean? Does that mean that you cannot prescribe a modern ICNS (e.g. fluticasone) but you can an older one (e.g. beconase). Or does that mean that the GP cannot prescribe an ICNS at all? It might be worthwhile putting the work a little bit more in perspective of other literature on the same subject. See refs below but others might exist. Hoffmans R, Schermer T, van Weel C, Fokkens W. Management of rhinosinusitis in Dutch general practice. Prim Care Respir J. 2011;20(1):64-70. Hoffmans R, Schermer T, van der Linde K, Bor H, van Boven K, van Weel C, et al. Rhinosinusitis in morbidity registrations in Dutch General Practice: a retro-spective case-control study. BMC family practice. 2015;16:120.

REVIEWER	Sanna Toppila-Salmi Helsinki University Hospital and University of Helsinki, Finland
REVIEW RETURNED	12-Jul-2018

GENERAL COMMENTS	This semi-structured qualitative telephone interview showed that GPs describe themselves as confident in recognizing CRS, with the exception of assessing nasal polyps, whereas specialists report common missed diagnoses. Steroid nasal sprays provide basic in primary care and poor adherence is perceived to be the causes of inadequate symptom control. Inadequate disease control, and patient pressure drive referral. In secondary care surgery is regarded as an important treatment option for patients with severe disease, although timing of surgery remains unclear. The study is important to show that there is uncertainty about best management of patients with CRS in both primary and secondary care and practice is varied. Thus improved care pathway is needed. There are some concerns. 1. The major concern is that the difference of the populations might be a confounding factor when observing the differences of responses between GPs and ENT specialists. Otorhinolaryngologists and GPs see different CRS patients. This might affect their opinion on easiness or difficulties of CRS diagnosis and treatment. If possible, please consider to provide additional data of GPs responses separately of their “general CRS population” and of their "CRS population who get referral to Otorhinolaryngologist”. If this data is not available, please consider to discuss this as a limitation. 2. Please provide non-responder data of doctors, if available, e.g. age, gender, GP/ENT, region, reason of not responding to the telephone review. Please discuss would their responses have affected the results? Now non-responder aspect is dealed only in the beginning of the Manuscript (Strengths and limitations -section). 3. The information given in the Appendix 1 is not fully clear. Please consider to clarify it and to provide online supplement data of the questions and responses. Please consider also to provide Supplementary data of methods how the opinions of GP group and ENT group were drawn and generalized that are presented in the results section. 4. Please consider to add the following reference: Desrosiers M, Evans GA, Keith PK, Wright ED, Kaplan A, Bouchard J, Ciavarella A, Doyle PW, Javer AR, Leith ES, Mukherji A, Schellenberg RR, Small P, Witterick IJ. Canadian clinical practice guidelines for acute and chronic rhinosinusitis. Allergy Asthma Clin Immunol. 2011. 5. The authors conclude that integrated care pathway for CRS is needed. Please consider to discuss if also development of diagnostic and predictive algorithms would be useful.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Wytske Fokkens

Institution and Country: Dept of ORL, AMC, The Netherlnds

Please state any competing interests or state ‘None declared’: performs similar studies in the Netherlands

Please leave your comments for the authors below

This is a very interesting study describing what we "all know" but now well substantiated.

- *Thank you for your comments and reflections on the significance of our work.*

I only have some minor comments:

1) It is not totally clear to me how the GP and ENT were purposefully chosen. Maybe an exact description of inclusion/exclusion criteria would help

   – *The main inclusion criteria for taking part in the study was experience of treating patients with CRS (in primary or secondary care). Respondents were then sampled for a range of characteristics including location, gender, time in practice and (ENT) sub-speciality including general ENT surgeons and specialist rhinologists. This has now been clarified in the methods section.*

2) It is also not totally clear to me what the training status of the interviewers is. Is the first author MD? PhD (I presume yes seeing dr. but probably not so clear to non Dutch). Psychologist? Any knowledge on CRS?

   – *The interviewer (Jane Vennik) is a postdoctoral research fellow, trained in qualitative research methods in healthcare research, with previous experience of ENT and primary care research. This has now been clarified in the text.*

3) Can the authors explain what local prescribing restrictions mean? Does that mean that you cannot prescribe a modern ICNS (e.g. fluticasone) but you can an older one (e.g. beconase). Or does that mean that the GP cannot prescribe an ICNS at all?

   – *This has now been clarified in the text in the results section. GPs are required to prescribe lower cost INCS rather than more costly ones such as fluticasone.*

4) It might be worthwhile putting the work a little bit more in perspective of other literature on the same subject. See refs below but others might exist.

   Hoffmans R, Schermer T, van Weel C, Fokkens W. Management of rhinosinusitis in Dutch general practice. Prim Care Respir J. 2011;20(1):64-70.

   Hoffmans R, Schermer T, van der Linde K, Bor H, van Boven K, van Weel C, et al. Rhinosinusitis in morbidity registrations in Dutch General Practice: a retro-spective case-control study. BMC family practice. 2015;16:120.

   – *We have now added to our discussion section discussing our results in relation to wider practice..*

Reviewer: 2
Reviewer Name: Sanna Toppila-Salmi
Institution and Country: Helsinki University Hospital and University of Helsinki, Finland
Please state any competing interests or state ‘None declared’: None declared

Please leave your comments for the authors below

This semi-structured qualitative telephone interview showed that GPs describe themselves as confident in recognizing CRS, with the exception of assessing nasal polyps, whereas specialists report common missed diagnoses. Steroid nasal sprays provide basic in primary care and poor adherence is perceived to be the causes of inadequate symptom control. Inadequate disease control, and patient pressure drive referral. In secondary care surgery is regarded as an important treatment option for patients with severe disease, although timing of surgery remains unclear.
The study is important to show that there is uncertainty about best management of patients with CRS in both primary and secondary care and practice is varied. Thus improved care pathway is needed.

There are some concerns.

1) The major concern is that the difference of the populations might be a confounding factor when observing the differences of responses between GPs and ENT specialists. Otorhinolaryngologists and GPs see different CRS patients. This might affect their opinion on easiness or difficulties of CRS diagnosis and treatment. If possible, please consider to provide additional data of GPs responses separately of their “general CRS population” and of their "CRS population who get referral to Otorhinolaryngologist”. If this data is not available, please consider to discuss this as a limitation.

   - *Thank you for highlighting this point. We agree that GPs and ENT specialists see different populations of patients, with GPs seeing a wide range of severity and ENT specialists generally seeing those more severe patients who have not responded to treatment in primary care. However, we don't see this is a 'confounding' factor. We have selected different participant groups (GPs and ENTS surgeons) to provide different views and perspectives of current management. ENT surgeons reflected on their observations that many patients arrive in ENT clinics without having CRS and from this associate with GPs having limited skills and training. However, we have added to the discussion the problems that GPs may have when seeing such a range of CRS severity.*

2) Please provide non-responder data of doctors, if available, e.g. age, gender, GP/ENT, region, reason of not responding to the telephone review. Please discuss would their responses have affected the results? Now non-responder aspect is dealed only in the beginning of the Manuscript (Strengths and limitations -section).

   - *Unfortunately it is not possible to provide any demographic details of the non-respondents as this data could not be collected. The ENT surgeons were sampled for their experience, sub-specialisation and location and GPs sampled for their sociodemographic region and practice location. Qualitative research cannot be generalizable but should be described in such detail that readers can assess whether the results are transferable to the wider setting. We believe that our sample included a sufficient range of healthcare professionals to provide views and perspectives of current management of CRS in the UK, but it is always possible and in fact likely that other views exist outside of the participant group and this has been mentioned in the strengths and limitations section.*

3) The information given in the Appendix 1 is not fully clear. Please consider to clarify it and to provide online supplement data of the questions and responses. Please consider also to provide Supplementary data of methods how the opinions of GP group and ENT group were drawn and generalized that are presented in the results section.

   - *The information provided in appendix 1 is the interview guide used to guide the semi-structured interviews with ENT surgeons and GPs. Thank you for highlighting that we could be clearer with the analytical method. Each participant group was coded, grouped, refined and labelled into a set of themes individually, and then mapped together to provide overarching themes and sub-themes. This has now been described in the analysis section.*

4) Please consider to add the following reference: Desrosiers M, Evans GA, Keith PK, Wright ED, Kaplan A, Bouchard J, Ciavarella A, Doyle PW, Javer AR, Leith ES, Mukherji A, Schellenberg RR, Small P, Witterick IJ. Canadian clinical practice guidelines for acute and chronic rhinosinusitis. Allergy Asthma Clin Immunol. 2011.

   - *Thank you. We have now included this reference*

5) The authors conclude that integrated care pathway for CRS is needed. Please consider to discuss if also development of diagnostic and predictive algorithms would be useful.

- *Thank you for this suggestion. We plan to develop such algorithms following completion of the whole programme of work (MACRO) which this sits within.*

VERSION 2 – REVIEW

REVIEWER	wytske Fokkens amc netherlands
REVIEW RETURNED	03-Sep-2018

GENERAL COMMENTS	The reviewer completed the checklist but made no further comments.

REVIEWER	Sanna Toppila-Salmi Helsinki University Hospital and University of Helsinki Helsinki Finland
REVIEW RETURNED	26-Sep-2018

GENERAL COMMENTS	The reviewer completed the checklist but made no further comments.