

## Non-attending patients in general practice

We agree with Frans Smits and Gerben ter Riet when, in their comment,<sup>1</sup> they suggest that it could be valuable to frame questions relating to non-attendance in terms of societal benefits and harms. However, we would like to take this opportunity to provide some additional clarification with regards to our analysis and presentation of results.<sup>2</sup>

Smits and ter Riet argue that we should have included information on medical diagnoses in our study<sup>2</sup> rather than provide this analysis in a future publication. Our decision to incorporate this information into a future publication was not taken lightly; the issues were raised during the review process, with one reviewer suggesting that the burden of long-term conditions is likely to be an important factor in the unmet need and behaviours of the patients within this population.<sup>3</sup> However, we judged that presenting these data satisfactorily in a single paper would have been overly complex, with other reviewers supporting this decision. In addition to a paper that will focus specifically on patients with multiple long-term conditions, we also plan to publish a future overarching paper focused on unmet need along with health-care utilisation across the health system.

Smits and ter Riet also suggested that our analysis might benefit from a multilevel approach that would involve the use of zero-inflated negative binomial models. Such an approach might be particularly useful, given that 54% of patients did not miss any appointments. We considered that the negative binomial models fitted the data reasonably well. An initial analysis attempted to use a mixed effects regression allowing for random practice effects, but even the simplest of models proved intractable in a dataset of this size, which was

held with limited computational capacity (Safe Haven). To counter this limitation, we adjusted the analysis for available practice-level variables.

In our article,<sup>2</sup> we focused on describing the data, and the main effects of several patient and practice-level factors. To examine cross-factor interactions would have added another layer of complexity, which would have been very difficult to condense into a single paper. Such analyses would probably best be focused on interactions between a single factor (eg, sex) and factors that predict frequent non-attendance to address a coherent research question.

Finally, we agree that frequent attenders are indeed an interesting subgroup within themselves, which was why all our models were offset for the number of appointments made.<sup>2</sup> However, the claim that frequent attendance would prompt more changes to clinical work than non-attendance is unfounded. Although frequent attenders and frequent non-attenders are qualitatively different in terms of social and socioeconomic problems, they provide two equally important examples of unmet need.<sup>2,4,5</sup>

We declare no competing interests.

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\*David A Ellis, Ross McQueenie, Alex McConnachie, Philip Wilson, Andrea Williamson  
[d.a.ellis@lancaster.ac.uk](mailto:d.a.ellis@lancaster.ac.uk)

Department of Psychology, Lancaster University, Lancaster, UK (DAE); General Practice and Primary Care, School of Medicine, Dentistry and Nursing, MVLS, University of Glasgow, Glasgow, UK (RM); Robertson Centre for Biostatistics, Institute of Health and Wellbeing, MVLS, University of Glasgow, Glasgow, UK (AM); Centre for Rural Health, Institute of Applied Health Sciences, University of Aberdeen, Aberdeen, UK (AW).

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