Reviewer's report

Title: Resident Interest and Factors Involved in Entering a Pediatric Pulmonary Fellowship

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Reviewer: Michelle Mayer

Reviewer's report:

General

This article examines three poorly understood issues in pediatric subspecialties: the level of interest in a subspecialty during residency, factors that influence the level of interest in pulmonary training, and the relationship between availability of a pulmonary fellowship and interest in pulmonary training. The strengths of the manuscript include a high response rate and a clearly defined set of questions. The major weakness is insufficient power due to a small sample size. I believe that modifications of the analytical strategy, namely use of factor analysis, may improve the analysis.

The paper, especially the methods and results sections, require substantial editorial revisions.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1.) The "Methods" section needs substantial revisions. It needs considerable editorial revision as it was difficult to follow. In addition several issues need to be addressed:
   a.) How many attempts were made to distribute the survey?
   b.) Was it a mail survey (specify how it was distributed)?
   c.) Was Human Subjects approval obtained? How was consent obtained?
   d.) Was data collected anonymously or was it collected with identifiers that were removed during analysis?
   e.) Specify what type of analyses used the Fisher's exact (categorical with cell sizes of less than 5?) and when unpaired t-tests were used.
   f.) The approach to defining +PF and -PF should be in the methods section

2.) The statement "These numbers compare with 9 of the 52 residents in 1992 (17%) who actually completed fellowship training compared to 8 of the 24 graduating residents from the 2002 survey (33%) who began fellowship training in 2003" is problematic because the former includes residents of all years. Those in their first and second years may be less able to predict their career decisions than graduating residents. I think this comparison should be limited to graduating residents in both years.

3.) The study is likely underpowered despite the high response rate. I would like to see some post-hoc calculations performed to assess the level of power that the authors had to detect differences of the magnitude that they found. This discussion should be added to the limitations section.

4) Factor analysis seems like a reasonable approach to this analysis given the number of comparisons and the likelihood that several may cluster together. I think that a consultation with a biostatistician may be very useful in reorganizing the analysis of influential factors.
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1.) This statement in the first paragraph of the discussion needs a reference: Residents consider various practice options early on in their training and frequently do not tend to narrow their choices until their second or third year of residency.

2.) "Two scores in the -PF resident group decreased from 1992 to 2002: not enough pulmonary patient experience to decide on a pulmonary fellowship and too few perceived pulmonary job openings. The first may be a positive reflection on the local resident experience with pulmonary patients in recent years though this is only speculative. The second received very low scores during both periods and probably is not very relevant." I would discuss the former statement on it's own. It's really the only evidence of a potential benefit of having a new fellowship program. The latter statement is unlikely irrelevant because there has been some evidence of a reversal in the trend towards general practice in recent years (see the recent Cull et al paper in Pediatrics.

Discretionary Revisions (which the author can choose to ignore)

1) It would be interesting to know the PPV and NPV of residents planned career goals.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes

Declaration of competing interests:
None