PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Factors influencing the decisions of senior UK doctors to retire or remain in medicine: national surveys of the UK-trained medical graduates of 1974 and 1977
AUTHORS	Smith, Fay; Lachish, Shelly; Goldacre, Michael; Lambert, Trevor

VERSION 1 - REVIEW

REVIEWER	Michelle Silver
	University of Toronto, Canada
REVIEW RETURNED	23-May-2017

GENERAL COMMENTS	This paper reports on attitudes about retirement for doctors who
	entered medicine in 1974 and 1977 in the UK. The authors are to be commended for this insightful and descriptive paper, which I believe makes an original and substantial contribution to current knowledge in the area of physician retirement. This paper yields information based on a survey with a fantastic response rate that is useful for forecasting and understanding human resource issues within medicine. I read this paper with great interest and suspect that medical professionals will find value in it. In an effort to support and strengthen this paper, I make the following comments:
	Major comments
	1. Much of the analyses include comparisons for men versus women. From Table 2 it is clear that half as many women as men were in medicine/in the study, could this difference be mentioned in the body of the paper?
	2. Median age for respondents at the time of the survey for each cohort are reported, can we have more information about the age of respondents? Given that the aim of this paper is to report on factors influencing retirement decisions and factors that encourage them to stay longer, why not report age at graduation, retirement, and by gender? Was age at graduation in 1974 and 1977 the same? For example, with US data, we might worry about differences given that the Vietnam War was still going on in 1974 and over by 1977. Likewise, could any differences be attributed to retiring near the financial crisis? Are there any notable differences in age of
	graduation or age at retirement by gender? I.e. Do women enter later and retire earlier? How old were respondents when they retired? Is there variation by age at retirement in the factors that would encourage doctors to stay working in medicine longer? The
	Results indicate men were more likely than women to retire because they did not want to do out-of-hours work, could this be related to differences in age at retirement by gender? Perhaps the authors
	could consider a table showing the average age by factors that would encourage doctors to stay working in medicine longer and/or gender?

 The first set of paragraphs of the Discussion section is repetitive of what we just read in the Results. Is there a way to present main findings as an interpretation of results or to consider a slight reworking so that the restatement of the findings is just one paragraph that leads into a discussion that integrates findings with existing literature? Along these lines, why might some of the observed differences occur: for example, why might be it that radiologists were more likely to have retired when they planned to versus others? In some regions of British Columbia, I have heard of phased retirement packages in certain specialties that eliminate night call in combination with an arrangement to retire within a fixed number of years. Some of the findings from this paper are novel and some are important extensions of what has been demonstrated in the literature that could be presented in a way that helps the reader more easily recognize the important contribution this paper makes to existent literature. Some of the studies mentioned in the Discussion could be mentioned in the Introduction to frame the broader context for this study. One note for the Strengths and Limitations is that retired doctors may be less likely to respond for a range of reasons including deteriorating health. Doctors' health is a somewhat overlooked topic in the literature more broadly, nonetheless declining health is an important reason doctors may be pushed into retirement with less time to prepare financially, to create a succession plan, or otherwise for the transition. Minor Comments The last paragraph in the Results on page 8 gives the median age for the doctors at the time of the survey for each cohort and then gives the median age for men and women – is that for men and women overall across both cohorts?

REVIEWER	Professor Alan Bleakley
	Emeritus
	Plymouth University Peninsula School of Medicine & Dentistry
REVIEW RETURNED	24-May-2017

GENERAL COMMENTS	This paper reports an extremely useful study on attitudes to retirement of late career doctors. Results are highly reliable thanks to a very good response rate and this reflects on the clarity of the questionnaire design and processes of administration and data
	 collection. 1. The conclusions to the study reflect only one aspect of doctors' work - their clinical duties. This by-passes other, very important, potential roles for late career doctors such as mentoring, teaching, public engagement, and writing and publishing. In particular, senior doctors have a very important role in mentoring juniors. The questionnaire would be much improved if it investigated these 'non-clinical' concerns. 2. Early retirement for 'family/ leisure' reasons may of course invite

dissimulation, where the primary reason is stress or burnout that doctors do not wish to admit. Given that the second major reason for retirement is concerns about workload and personal health, related to structural issues such as lack of resourcing in the NHS, perhaps greater explicit political capital could have been made out of this finding in the discussion - eg arguing for a greater role for 'coalface' working doctors and less of a role for politicians in (re)structuring the NHS. The conclusions are rather muted, or indeed tepid, in this regard. As long as the discussion is clearly marked as speculative, this does not affect the objective reporting of the data.
3. Details of the methodology are given in a separate paper, so the reader is not able to tell from this account whether or not the questionnaire had closed questions only or the opportunity for free text narrative responses. The latter would have enriched the data and the structure of the questionnaire might be expanded a little more than it is in this account.
4. Finally, given the recent radical shift in gender balance in medicine towards a predominance of women, the authors might have offered some speculative comment about what the future may hold in light of the results from these cohort studies, speculating on some of the historical trends.
In summary, this is an important study and will inform commentators particularly in the fields of medical education and workforce planning, but it offers a rather flat, uninspiring read as a narrative. I would like to see a little more critical attention to the data in terms of what changes need to be made structurally in medicine to prevent relatively high rates of early exit of talented doctors providing a highly skilled body of capital, including employment of that capital in non clinical roles such as mentoring, education and public engagement.
One typo: p.4 line 8 - 'don' should be 'done'

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1 Reviewer Name: Michelle Silver Institution and Country: University of Toronto, Canada

This paper reports on attitudes about retirement for doctors who entered medicine in 1974 and 1977 in the UK. The authors are to be commended for this insightful and descriptive paper, which I believe makes an original and substantial contribution to current knowledge in the area of physician retirement. This paper yields information based on a survey with a fantastic response rate that is useful for forecasting and understanding human resource issues within medicine. I read this paper with great interest and suspect that medical professionals will find value in it.

RESPONSE: We thank the reviewer for her kind comments.

In an effort to support and strengthen this paper, I make the following comments:

Major comments

1. Much of the analyses include comparisons for men versus women. From Table 2 it is clear that half

as many women as men were in medicine/in the study, could this difference be mentioned in the body of the paper?

RESPONSE: We have added (first paragraph of Results) the following:

"These two cohorts graduated many years before the recent increase in the UK in the proportion of women among successive cohorts of UK medical graduates. In 1974 the graduation cohort was 73.2% male (1717/2347), and the cohort of 1977 was 67.5% male (2116/3135)."

We have also added (second sentence, third paragraph of Results) the sentence

"The response rate among men was 84.4% (2554/3026) and that among women was 85.0% (1141/1343)."

We have also commented on male-female differences in the scale of retirement (higher percentages of women than men), Abstract, Results and paragraph towards the end of Discussion in main text.

2. Median age for respondents at the time of the survey for each cohort are reported, can we have more information about the age of respondents? Given that the aim of this paper is to report on factors influencing retirement decisions and factors that encourage them to stay longer, why not report age at graduation, retirement, and by gender? Was age at graduation in 1974 and 1977 the same? For example, with US data, we might worry about differences given that the Vietnam War was still going on in 1974 and over by 1977. Likewise, could any differences be attributed to retiring near the financial crisis? Are there any notable differences in age of graduation or age at retirement by gender? I.e. Do women enter later and retire earlier? How old were respondents when they retired? Is there variation by age at retirement in the factors that would encourage doctors to stay working in medicine longer? The Results indicate men were more likely than women to retire because they did not want to do out-of-hours work, could this be related to differences in age at retirement by gender? Perhaps the authors could consider a table showing the average age by factors that would encourage doctors to stay working in medicine longer and/or gender?

RESPONSE: We agree that the relationship between age on graduation, age at retirement, gender, and specialty (different specialties may from time to time have different rules about retirement provision) is potentially important and worthy of study. In fact we are working on a companion paper which looks at these issues in some depth for these two cohorts. Space constraints, in a paper which already has five tables and one appendix table, preclude a full analysis of this in the current paper.

A higher percentage of women than men had retired at the time of the survey. The average retirement age was slightly lower for women (59.5 for women and 60.5 for men in the 1974 cohort, 58.1 for women and 59.0 for men in the 1977 cohort) and the women were slightly younger (63.8 vs 64.3 in the 1974 cohort and 60.8 vs 61.2 in the 1977 cohort).

3. The first set of paragraphs of the Discussion section is repetitive of what we just read in the Results. Is there a way to present main findings as an interpretation of results or to consider a slight reworking so that the restatement of the findings is just one paragraph that leads into a discussion that integrates findings with existing literature? Along these lines, why might some of the observed differences occur: for example, why might be it that radiologists were more likely to have retired when they planned to versus others? In some regions of British Columbia, I have heard of phased retirement packages in certain specialties that eliminate night call in combination with an arrangement to retire within a fixed number of years. Some of the findings from this paper are novel and some are important extensions of what has been demonstrated in the literature that could be presented in a way that helps the reader more easily recognize the important contribution this paper makes to existent

literature.

RESPONSE: We have followed the convention of reporting key findings at the beginning of the Discussion, we accept that this can seem a little repetitive of the Results but we believe it helps the reader to set the context for the rest of the Discussion. We have added reference to other work, expanding the comparison with existing literature, and adding details of further work, and more detail to the implications of this study. We hope that these additions go some way towards meeting the reviewers' comments, without over-extending the length of the paper.

4. Some of the studies mentioned in the Discussion could be mentioned in the Introduction to frame the broader context for this study.

RESPONSE: We hope the editors will bear with us in not restructuring the Introduction and Discussion further: the former contains 9 references and we are cautious about making it over-long without getting to the point of the study. We accept that these considerations are a matter of style and preference, and hope that our approach is acceptable.

5. One note for the Strengths and Limitations is that retired doctors may be less likely to respond for a range of reasons including deteriorating health. Doctors' health is a somewhat overlooked topic in the literature more broadly, nonetheless declining health is an important reason doctors may be pushed into retirement with less time to prepare financially, to create a succession plan, or otherwise for the transition.

RESPONSE: We have added the following to the Strengths and Limitations section (within the Discussion):

"As has been mentioned elsewhere, retired, though contactable, doctors may be less likely to respond. This may be for a variety of reasons including deteriorating health."

Minor Comments

1. There is a typo in the second to last point on page 4 in the section "Strengths and limitations of this study": "... some may not have don, and there..."

RESPONSE: Amended.

2. The last paragraph in the Results on page 8 gives the median age for the doctors at the time of the survey for each cohort and then gives the median age for men and women – is that for men and women overall across both cohorts?

RESPONSE: For clarity we have replaced the two sentences in question by

"The median age of the doctors from the cohorts at the time of the surveys was 64 (men 64, women 63) for the 1974 cohort and 61 (men 61, women 60) for the 1977 cohort."

3. More than one sections/paragraphs include only one sentence.

RESPONSE: We have now merged paragraphs where we have thought it appropriate.

Reviewer: 2 Reviewer Name: Professor Alan Bleakley Institution and Country: Emeritus, Plymouth University Peninsula School of Medicine & Dentistry

This paper reports an extremely useful study on attitudes to retirement of late career doctors. Results are highly reliable thanks to a very good response rate and this reflects on the clarity of the questionnaire design and processes of administration and data collection.

RESPONSE: We thank the reviewer for his kind comments.

1. The conclusions to the study reflect only one aspect of doctors' work - their clinical duties. This bypasses other, very important, potential roles for late career doctors such as mentoring, teaching, public engagement, and writing and publishing. In particular, senior doctors have a very important role in mentoring juniors. The questionnaire would be much improved if it investigated these 'non-clinical' concerns.

RESPONSE: We recognise that many senior doctors will undertake non-clinical roles. We did in fact ask doctors to indicate the makeup of their working week as follows:

Approximately what percentage of your working time do you spend each week, on average, on each of these areas? Clinical work Teaching and training Research Management Other (please describe) * * If you have selected 'Other', please describe the type of work

There is scope for a short paper summarising these concerns, particularly since we also asked doctors whether they would like to spend more, or less, time in each of these areas. We feel, however, that an attempt to cover these points in this paper would take us beyond its currently proposed scope and length. We have added in Discussion: "We asked the doctors about their roles in addition to clinical work, specifying 'teaching and training, research, management' and 'other (please describe)'. We will report on the doctors' responses on these elsewhere.

2. Early retirement for 'family/ leisure' reasons may of course invite dissimulation, where the primary reason is stress or burnout that doctors do not wish to admit. Given that the second major reason for retirement is concerns about workload and personal health, related to structural issues such as lack of resourcing in the NHS, perhaps greater explicit political capital could have been made out of this finding in the discussion - eg arguing for a greater role for 'coalface' working doctors and less of a role for politicians in (re)structuring the NHS. The conclusions are rather muted, or indeed tepid, in this regard. As long as the discussion is clearly marked as speculative, this does not affect the objective reporting of the data.

RESPONSE: We understand the points being made. We are usually cautious in these areas, because it is easy to appear to be extrapolating beyond what the data will support. The final sentence of the Implications calls for reduced workloads in bureaucracy, shorter working hours, and reduced emergency commitments for senior doctors.

3. Details of the methodology are given in a separate paper, so the reader is not able to tell from this account whether or not the questionnaire had closed questions only or the opportunity for free text narrative responses. The latter would have enriched the data and the structure of the questionnaire might be expanded a little more than it is in this account.

RESPONSE: It is not possible in a single paper to do full justice to a wide ranging questionnaire which has supplied a rich vein of data. There is additional data in the form of free text responses to some general questions towards the end of the questionnaire, which we are in the process of analysing for publication.

These include the following which have yet to be analysed:

Thinking about policy, practice, and health services in the UK... What single change, in policy or practice, would you like to see in your own specialty? What single change, in policy or practice, would you like to see in the NHS? Thinking about your own career... What, if anything, would you like to have changed in your own career path? At what stage? What prevented you from doing so?

Questions about the adverse effects on health or well-being of working as a doctor have recently been published in JRSM:

Adverse effects on health and wellbeing of working as a doctor: views of the UK medical graduates of 1974 and 1977 surveyed in 2014 Fay Smith, Michael J Goldacre, Trevor W Lambert Volume: 110 issue: 5, page(s): 198-207 Article first published online: January 1, 2017;Issue published: May 1, 2017

We have added, in Discussion, a short section on 'further work' that we expect to do using responses to our surveys. We hope that this will suffice to tell readers what else can be expected from us on these topics.

4. Finally, given the recent radical shift in gender balance in medicine towards a predominance of women, the authors might have offered some speculative comment about what the future may hold in light of the results from these cohort studies, speculating on some of the historical trends.

RESPONSE: We agree: and have now covered this at the end of 'Implications' in Discussion.

In summary, this is an important study and will inform commentators particularly in the fields of medical education and workforce planning, but it offers a rather flat, uninspiring read as a narrative. I would like to see a little more critical attention to the data in terms of what changes need to be made structurally in medicine to prevent relatively high rates of early exit of talented doctors providing a highly skilled body of capital, including employment of that capital in non clinical roles such as mentoring, education and public engagement.

RESPONSE: We hope that the amendments we have made to the Discussion will partly address these comments. We prefer to be cautious in interpretation and to avoid extrapolating beyond the data but we hope that there is food for thought in the views of different groups of senior doctors, particularly in the contrasting views of those who work in different specialties.

One typo: p.4 line 8 - 'don' should be 'done'

RESPONSE: Amended.

VERSION 2 – REVIEW

REVIEWER	Michelle Silver
	University of Toronto, Canada
REVIEW RETURNED	11-Jun-2017

GENERAL COMMENTS	The authors have sufficiently addressed the comments. Again this
	paper makes an original and substantial contribution to current
	knowledge in the area of physician retirement.

REVIEWER	Professor Alan Bleakley Plymouth University Peninsula School of Medicine and Dentistry
REVIEW RETURNED	15-Jun-2017

GENERAL COMMENTS	Thank you for such a positive and detailed response to reviewers' feedback. The paper is improved as a result and offers an important
	contribution to the literature. It was important to clarify issues about data from the same study that will be published elsewhere, showing focus on a different aspect of the work. You have been diligent and
	patient in your responses, properly arguing the case where you disagreed with reviewers' comments. Thank you for this fine study and I look forward to its publication.