

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Did Government Spending Cuts to Social Care for Older People Lead to an Increase in Emergency Hospital Admissions? An Ecological Study; England 2005 to 2016
AUTHORS	Seamer, Paul; Brake, Simon; Moore, Patrick; Mohammed, Mohammed; Wyatt, Steven

VERSION 1 - REVIEW

REVIEWER	Sarah Simpson EquiACT Conjoint Lecturer, University of NSW, Australia
REVIEW RETURNED	10-Aug-2018

GENERAL COMMENTS	<p>Thank you for the opportunity to review this really interesting paper. I think the statistical component needs specialist review but they explore a very interesting topic and point the way for further research on this question. I have a few comments and questions that the authors need to address so that the article can be revised and published. These comments are linked to my scoring above. Also I note that in some cases my replies would be between yes and no e.g. Are the outcomes clearly defined. So I have chosen no in some instances to draw attention to issues to be raised in these comments.</p> <p>The authors need to define what is meant by social care because while apparently obvious it may not be clear to a global audience what kind of services are provided e.g. assistance with bathing, mobility aids etc and why this might impact on hospital emergency admissions. Nowhere is it defined. It only needs one sentence and or it could have a link to a government website that sets out what is included. Otherwise the theory of why it is important is implied rather than explicit. Even more important when you get to the discussion and state "The prima-facie explanation for the observed results is that social care provision is not an effective means of preventing emergency hospital admissions for older people." but what is social care provision as a preventive measure? Then in next paragraph of discussion you suggest that the social worker might identify an unmet need that triggers the admission - useful here to give an example to assist the reader e.g. falls risk. Linked to this why would they perhaps identify a need that triggers ED admission rather than a visit to the GP? There is a strong primary health care system in the UK and its role in reducing ED admissions through continuity of care and provider is not factored into explaining the social care versus ED admissions theory. The third explanation about substituting care is also problematic because it seems to assume that when there is private or publicly</p>
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	<p>funded care that informal care drops off. But we know that there is still a significant proportion of informal care that continues where people do not live alone and are receiving public or privately funded social care. The paper does not include data on informal care and could benefit from some data on estimated level of informal care provided for people aged 65+years in UK. Another challenge with the paper that the data is only for people aged 65+ years and there is a big difference between 65years and 75 and 80+ years which could be affecting the data and its interpretation. The lack of age- and sex-disaggregation in the data should be discussed as a limitation because we cannot see if there are changes within the broad 65+year group. They also do not discuss that despite rising chronic disease people may be coming to older age in slightly better physical health than previous generations. As the authors indicate it is an ecological study and so we do not know if the same people receiving social care are those being admitted to ED.</p> <p>The study design is and is not appropriate to answer the question. It is appropriate to answer it in a gross sense but as the authors indicate far more research is needed and all it shows is that on the face of it ED admissions did not increase. However there are many limitations (as indicated in the paper and in my comments above) that qualify a blanket application that ED admissions did not increase because of a drop in social care spending.</p> <p>Thank you and I hope the authors find this useful.</p>
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REVIEWER	Dr Ian Pope Norfolk and Norwich University Hospital, Norwich, UK
REVIEW RETURNED	18-Aug-2018

GENERAL COMMENTS	<p>Thank you for asking me to review this interesting and timely study.</p> <p>This is a longitudinal analysis of the relationship between government spending on social care in England and emergency admissions of older people. Surprisingly no relationship was found between the level of funding and emergency admissions. It is well designed and implemented, presented in a succinct manner and discussed appropriately.</p> <p>I have relatively few suggestions. Those I do have are below.</p> <p>On page 5 lines 12-15 you report that 5 councils were excluded because there was a 50% increase in hospital admissions for older people which you felt was implausible (with which I agree). However it would be useful to provide a little more information around the efforts you took to ensure this was erroneous and whether the characteristics of the excluded councils were such that it could have introduced bias into the study.</p> <p>On page 5 line 28 you introduce the concept of ambulatory care sensitive conditions. Given the plethora of different definitions of ACSC it would be useful to establish which you used and why. You also go on to define ACSC multiple times throughout the paper which is probably unnecessary.</p>
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	<p>On page 12 line 54 you have missed an s off the end the forms "number of formS of bias". In figure 1 and figure 3 you use ACS without defining it, I would stick to admissions for ACSC for clarity.</p> <p>On page 13 lines 14 - 17 you hypothesise about factors which might have caused a reduction in emergency admissions in other groups, thus counteracting the one in those receiving social care. The only explanation I can think of is that austerity causes more older people in receipt of funded social care to be admitted and causes wealthy older people to respond to reductions in funding of health care by seeking more private health care (and thus being admitted privately). I recognise that this is very unlikely!</p> <p>On page 13 lines 28 - 32 it would be useful to know where the discussed studies were conducted in order to give context.</p>
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REVIEWER	Arier Lee University of Auckland New Zealand
REVIEW RETURNED	27-Nov-2018

GENERAL COMMENTS	Design, analysis and result of this study is well described and presented clearly. Statistical analysis was conducted with appropriate methods including thorough sensitivity analysis. Discussion and conclusion are supported by the analysis result.
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1 comments

Comment: The authors need to define what is meant by social care because while apparently obvious it may not be clear to a global audience what kind of services are provided e.g. assistance with bathing, mobility aids etc and why this might impact on hospital emergency admissions. Nowhere is it defined. It only needs one sentence and or it could have a link to a government website that sets out what is included. Otherwise the theory of why it is important is implied rather than explicit.

Response:

We have added the following sentences to the opening paragraph of the introduction.

"The term 'social care' is used to describe a range of support services which help people carry out daily living tasks and therefore live independently. This can include help with washing, dressing, cooking, cleaning, getting in and out of bed as well as fitting adaptations such as stairlifts, handrails and bath seats. Social care can be delivered within an individual's private residence or as part of a placement in a care home or supported living scheme."

Comment: Then in next paragraph of discussion you suggest that the social worker might identify an unmet need that triggers the admission - useful here to give an example to assist the reader e.g. falls risk. Linked to this why would they perhaps identify a need that triggers ED admission rather than a visit to the GP?

Response: We have added the following sentence to the Third paragraph of the discussion.

"This could arise for example if a social care professional notices a deterioration in a patient's health status, referring the patient to a General Practitioner or Emergency Department."

Comment: There is a strong primary health care system in the UK and its role in reducing ED admissions through continuity of care and provider is not factored into explaining the social care versus ED admissions theory.

Response: We have added the following sentence to the Third paragraph of the discussion.

Whilst the UK has a strong primary health care system and might be expected to manage clinical risks in these circumstances, GP services are under pressure and access to primary care remains a problem.

Comment: The third explanation about substituting care is also problematic because it seems to assume that when there is private or publicly funded care that informal care drops off. But we know that there is still a significant proportion of informal care that continues where people do not live alone and are receiving public or privately funded social care. The paper does not include data on informal care and could benefit from some data on estimated level of informal care provided for people aged 65+ years in UK.

Response: We have added the following sentences to the fourth paragraph of the discussion along with supporting references.

"While public and private provision have been falling informal care has increased substantially. A survey conducted by Department of Work & Pensions estimates that 8% (4.9million) of people were informal carers in England in 2016. Since 2004 the average daily minutes of adult care provided by those aged 8 or over has risen year on year. The gross value added of informal adult care in the UK increased by 45.8% between 2005 and 2014, from £39.0 billion to £56.9 billion. These figures demonstrate a substantial and sustained shift from public to informal care provision over the period of this study. "

Comment: Another challenge with the paper that the data is only for people aged 65+ years and there is a big difference between 65years and 75 and 80+ years which could be affecting the data and its interpretation. The lack of age- and sex-disaggregation in the data should be discussed as a limitation because we cannot see if there are changes within the broad 65+year group. They also do not discuss that despite rising chronic disease people may be coming to older age in slightly better physical health than previous generations. As the authors indicate it is an ecological study and so we do not know if the same people receiving social care are those being admitted to ED.

Response: We have added the following new paragraph at the end of the 'Limitations' sections.

"Whilst this study did not explicitly control for changes in the age profile or morbidity levels of the study population, the use of mortality rates as an independent variable adjusts for these factors indirectly."

Comment: there are many limitations (as indicated in the paper and in my comments above) that qualify a blanket application that ED admissions did not increase because of a drop in social care spending.

Response: We agree with the sentiment of this comment and hope the editors agree that our paper is carefully worded so as not to overstate the findings.

Reviewer 2 comments

Comment: On page 5 lines 12-15 you report that 5 councils were excluded because there was a 50% increase in hospital admissions for older people which you felt was implausible (with which I agree). However it would be useful to provide a little more information around the efforts you took to ensure this was erroneous and whether the characteristics of the excluded councils were such that it could have introduced bias into the study.

Response: We have added the following sentence to the fourth paragraph in the 'limitations' section.

"A small number of councils were excluded from our analysis. Whilst the rationale for the exclusions are clear and explicitly described, this process may have introduced bias."

Comment: On page 5 line 28 you introduce the concept of ambulatory care sensitive conditions. Given the plethora of different definitions of ACSC it would be useful to establish which you used and why. You also go on to define ACSC multiple times throughout the paper which is probably unnecessary.

Response: The manuscript included a reference containing the definitions for ACSCs that we had used, but the positioning of the reference was not helpful. We have moved the reference. We do not think the manuscript contains multiple definitions for ACSC.

Comment: On page 12 line 54 you have missed an s off the end the forms "number of formS of bias".

Response: Thank you. We have corrected this error.

Comment: In figure 1 and figure 3 you use ACS without defining it, I would stick to admissions for ACSC for clarity.

Response: We have amended the figures accordingly.

Comment: On page 13 lines 14 - 17 you hypothesise about factors which might have caused a reduction in emergency admissions in other groups, thus counteracting the one in those receiving social care. The only explanation I can think of is that austerity causes more older people in receipt of funded social care to be admitted and causes wealthy older people to respond to reductions in funding of health care by seeking more private health care (and thus being admitted privately). I recognise that this is very unlikely!

Response: We have added the following sentences to the fourth paragraph of the discussion along with supporting references.

"While public and private provision have been falling informal care has increased substantially. A survey conducted by Department of Work & Pensions estimates that 8% (4.9million) of people were informal carers in England in 2016. Since 2004 the average daily minutes of adult care provided by those aged 8 or over has risen year on year. The gross value added of informal adult care in the UK increased by 45.8% between 2005 and 2014, from £39.0 billion to £56.9 billion. These figures demonstrate a substantial and sustained shift from public to informal care provision over the period of this study. "

Comment: On page 13 lines 28 - 32 it would be useful to know where the discussed studies were conducted in order to give context.

Response: We have added the countries of origin for the studies listed in this paragraph.

VERSION 2 – REVIEW

REVIEWER	Sarah J Simpson EquiACT, France Conjoint Lecturer, University of NSW, Sydney
REVIEW RETURNED	28-Jan-2019

GENERAL COMMENTS	<p>Congratulations to the authors on the revised paper with key comments or questions addressed. While the discussion and conclusion are supported by the results, I would like to see more specific discussion in (a) the Implications for policy and research. The discussion and limitations sections are very strong in outlining all the possible reasons for the results and what cannot be drawn from the findings. However there is no mention of doing more a comprehensive study that includes a qualitative component. The other studies that the authors reference (refs #8-10) appear to be an analysis of quantitative data only. From a policy perspective I think more operational research with a qualitative dimension could be of benefit e.g. actual discussion with people affected in terms of using the services as well as GPs and others working at the primary care level. This would be an important way forward to better understand what is happening as well as increased ED admissions which is of concern for all those involved not just the finance directors of hospitals. The text to review the Better Care Fund could be revised to indicate the need for a comprehensive evaluation i.e. include a qualitative and quantitative component; and (b) Conclusion - I don't think the authors overstate the claims from the evidence but it is an ecological study and the conclusion seems to miss some of the nuances in the discussion around the null hypothesis e.g. the comment that further reductions in social spending won't lead to increased ED admissions (see Lines 13-22 on page 11). This message is not conveyed in the conclusion and could be (incorrectly) used by someone who does not read the whole paper to mean that cuts to social spending for older people don't make a difference to ED admissions as opposed to their being no evidence. I note however that you state you have found no evidence. I think if you raise the possibility of a more comprehensive look at the issue in the implications for policy and research section this would address my concern around this. Thank you for a really interesting paper.</p>
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REVIEWER	Ian Pope Norfolk and Norwich University Hospital & Norwich Medical School, UK
REVIEW RETURNED	26-Jan-2019

GENERAL COMMENTS	I am happy with the changes made and have no further comments.
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VERSION 2 – AUTHOR RESPONSE

Reviewer 1 comment: While the discussion and conclusion are supported by the results, I would like to see more specific discussion in (a) the Implications for policy and research. The discussion and limitations sections are very strong in outlining all the possible reasons for the results and what cannot be drawn from the findings. However there is no mention of doing more a comprehensive study that includes a qualitative component. The other studies that the authors reference (refs #8-10) appear to be an analysis of quantitative data only. From a policy perspective I think more operational research with a qualitative dimension could be of benefit e.g. actual discussion with people affected in terms of using the services as well as GPs and others working at the primary care level. This would be an important way forward to better understand what is happening as well as increased ED admissions which is of concern for all those involved not just the finance directors of hospitals. The text to review the Better Care Fund could be revised to indicate the need for a comprehensive evaluation i.e. include a qualitative and quantitative component; and (b) Conclusion - I don't think the authors overstate the claims from the evidence but it is an ecological study and the conclusion seems to miss some of the nuances in the discussion around the null hypothesis e.g. the comment that further reductions in social spending won't lead to increased ED admissions (see Lines 13-22 on page 11). This message is not conveyed in the conclusion and could be (incorrectly) used by someone who does not read the whole paper to mean that cuts to social spending for older people don't make a difference to ED admissions as opposed to their being no evidence. I note however that you state you have found no evidence. I think if you raise the possibility of a more comprehensive look at the issue in the implications for policy and research section this would address my concern around this.

Response: We agree with the reviewers comments and have added the following paragraph to the discussion section;

"Observational studies that operate at the patient level may provide insights into the relationship between social care spend and hospital admissions that cannot be obtained via ecological studies. Qualitative research could be used to explore the mechanisms by which social care influences health care use."