Author's response to reviews

Title: Influenza vaccination, inverse care and homelessness: cross-sectional survey of eligibility and uptake during the 2011/12 season in London.

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Author's response to reviews: see over
Dear Editor

Thank you very much for your comments and those of the reviewers. We have responded to each of the points below.

Editor's Comments:

You state that you only received verbal consent from participants. However, as some of the participants are minors, we ask that you clarify in your manuscript whether you received parental consent and why this was not written. Furthermore, although you say that ethics approval was not required, we ask that you please clarify whether your study was discussed with an ethics committee and whether the requirement was officially waived.

In the manuscript we have clarified that: “This anonymous survey was carried out by an NHS organisation for the purposes of improving service delivery to its client group and therefore an ethics committee was not approached for approval. The purpose of the questionnaire was explained to all participants prior to taking part in the survey, answering the survey questions implied consent. No questionnaires were completed at venues providing services to minors.”

In addition to this points made above, age was collected as categorical variable. The categories used for age in the questionnaire (16-24;25-34;35-44;45-44;45-55;55-64;>65) were chosen as these would overlap with the national influenza groups and hence an age category of 16-24 was chosen instead of 18-24, which may have led to the confusion. As stated above, no questionnaires were completed at venues providing services to minors.

Also, please make the following formatting changes during revision of your manuscript. Ensuring that the manuscript meets the journal’s manuscript structure will help to speed the production process if your manuscript is accepted for publication.

We have made all the changes as requested.
Reviewer 1 – Major revisions:

1. In methods section Authors tell that three investigators did perform the interview. This is a concern: was reliability assessed? How were they trained?

   We have added the following sentence to the discussion: “Three members of staff were trained to carry out the surveys across venues, however, no formal tests of inter-observer reliability were carried out and we cannot rule out the possibility of bias within the responses received.” It would not have been feasible to test this formally in this survey (e.g. by getting respondents to complete multiple questionnaires with different interviewers) as this was not a formal research study and attempting to assess reliability is likely to have had a significant impact on the uptake rates. This would have impacted on this service improvement work the survey was being carried out for. At this stage it may be possible to carry out a post-hoc analysis examining the differences in exposures and outcomes by the three interviewers, however, we feel this would be inappropriate as it would be extremely difficult to fully control for confounding factors such as the venue type, and therefore such an analysis and is likely to give misleading answers.

   In relation to training of the interviewers, we have added the following text to the manuscript: “Training of the interviewers involved them piloting and refining the questionnaire among peer educators who work for the service. Feedback to the interviewers from peers during the pilot process was used to develop a standardised approach to asking questions. The pilot process and data collection was overseen by the clinical lead for the service.”

2. I would like to know more about the questionnaire. It would be useful to have it enclosed to the text.

   A copy of the questionnaire is included in the appendix.

3. Table 1 should be referenced in the text; furthermore, because of missing data, Authors should indicate the number of people with available data for each variable. Moreover, Authors should provide captions.

   We have added a reference to table 1, detailed the missing data in a footnote, and provided captions on to the table.

4. Table 2 is confusing: Authors should pay attention to distinguish between vaccinated people and subjects at risk. Furthermore, some people did contribute to different risk groups. How did the Authors deal with this problem especially when they did release the number and the percentage of vaccinated people? I mean that a vaccinated homeless could contribute to several classes. This is confusing. I would separate people with one and more than one condition at risk in order to have a better idea of their distribution as well as of their vaccination coverage.
We have clarified the headings for table 2 as well as adding an explanatory footnote stating that individuals may have more than one chronic disease. As a single condition is sufficient to confer vaccine eligibility (our main interest for this piece of work) we have not provided vaccine uptake for those with multiple morbidities. Additionally, data on multi-morbidity at the national level is not available therefore a comparison to this would not be possible.

5. Since Authors did have access to patients registered to GPs and they used them as denominator in order to calculate percentage of people at risk and vaccinated I suppose that they could include confidence intervals (for national data) both in table 2 and figure 1. Furthermore, they could also apply statistical tests in order to understand if differences were statistically significant.

The data referred to in table 2 and figure 1 is national data is based upon over 97% of the population in England. It is therefore not a sample and the use of confidence intervals would be inappropriate, as we are not trying to infer the true proportion for a sample.

6. The discussion is quite weak: comparison to international literature is missing.

The discussion contains the following paragraph about the international literature: “Specific recommendations for influenza vaccination amongst homeless people are made in a number of international influenza vaccination policies(14). In the USA and Canada influenza vaccination is recommended for anyone ≥6 months of age without contraindications and specific provision is made to ensure high uptake among homeless people and staff in congregate settings(15,16). In Australia, influenza vaccination is recommended for homeless people and those providing care to them due to living conditions and prevalence of underlying medical conditions that will predispose to complications and transmission of influenza(17). Initiatives to outreach snapshot vaccination interventions against influenza, HBV, HAV, Streptococcus pneumoniae, and diphtheria to homeless populations in France have also been reported as effective(18,19).” We would be happy to add further references if the reviewer has any in particular, but we are not aware of other relevant work.

Minor revisions:

7. In the sample size description I would like to see also the estimate of eligible population from which sample size was drawn.
As this is not a parameter that informs the power calculation, we did not try to estimate this number. In addition to this, the estimates of the number of people accessing hostels and day centres are notoriously unreliable because it is a highly dynamic population and difficult to count. As a guide there are approximately 10,000 hostel beds in London, but not all for single homeless people, and these numbers are in a constant change of flux.

8. It would be interesting to have an idea of people not participating into the study in term of socio-demographic characteristics.

   It is very hard to collect this data on those who do not want to engage, but our high uptake rate (76.86%) minimises the potential for this to bias the results.

9. In results section it would be nice to have range of age.

   We collected age as a categorical variable it is therefore not possible to present this.

10. Authors should pay attention to concordance of number: for example they did not give all information about the 49 homeless who were vaccinated: for someone data are missing.

   We have corrected this omission.
Reviewer 2: Major revisions

1. Methods session, first paragraph: It is better to describe a little more of how the sampling were done: How the 27 venues were selected: Were they all the homeless service centers in London or part of them? How were they selected? Of the 27, how many were hostels, how many were day centers, and how many were drug services? What is the minimum and maximum number of clients recruited from an individual facility?

   In the methods section we have added: “This work was carried out alongside clinical work of Find and Treat and therefore convenience sampling was used for choosing venues with no specific sampling framework.”

   In the results section we have added: “Individuals were interviewed at 11 day centres, 11 hostels and 5 drug services. The minimum number of clients interviewed at a venue was one, the maximum was 75, with a median of a Add range, median of 23.”

2. Liability of estimates from a sample size less than 30 or confidence interval half width great than 10 is questionable. We usually not report such estimates. In Table 2, sample sizes for diabetes were 17, for age 65+ was 21. The confidence intervals were very wide. Would suggest suppress the numbers in the table or at least making a footnote for each of them in table and figure.

   We have chosen to report percentages with confidence intervals to inform readers of the uncertainty around these numbers as we feel this is more transparent and informative than supressing results from small groups.

Minor revisions

1. Change “immunization” to “vaccination” throughout the text, as it is more accurate,

   We have changed this as requested.

2. The title is losing focus. I find this paper is mainly about the influenza vaccination among homeless people, would suggest remove “inverse care”, would suggest change the title to “Eligibility and uptake of influenza vaccination among homeless people for 2011-12 influenza season, London, UK: A cross-sectional survey.”
We think inverse care is an important public health concept relevant to this group, we therefore important to include this in the title, however, we have altered the title to “Influenza vaccination, inverse care and homelessness: cross-sectional survey of eligibility and uptake during the 2011/12 season in London.” and hope this clarifies it somewhat.

3. For the proportion, I think it does not need to report two decimal, 1 decimal is enough, and it should be consistent throughout the manuscript

   We have changed this as requested.

4. “2011/12 influenza season” should be 2011-2012 influenza season”, keep it consistent through the manuscript.

   To be consistent with UK surveillance reports, we continue to use 2011/12, however, we have made sure that this format is throughout the manuscript.

5. The first sentence of the 4th paragraph of method session: “by using stata cluster commands” should be put after”… vaccine uptake were adjusted” to avoid confusion

   We have changed this as requested.

6. A reference article should be put after the “inverse care law” in the 2nd sentence of the first paragraph of the discussion session

   We have added a reference as requested.