PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Implementing professional behaviour change in teams under pressure – results from phase one of a prospective process evaluation (the Implementing Nutrition Screening in Community Care for Older People (INSCCOPe) project).
AUTHORS	Bracher, Mike; Steward, Katherine; Wallis, Kathy; May, Carl; Aburrow, Annemarie; Murphy, Jane

VERSION 1 - REVIEW

REVIEWER	Stuart Watson Newcastle University, UK
REVIEW RETURNED	10-Oct-2018

GENERAL COMMENTS	This NPT informed quantitative prospective evaluation of use of nutritional screening in a community sample is excellent. Implementation of any new practice or procedure within the NHS is challenging and this is an excellent example of good practice eloquently described

REVIEWER	Rachel van der Pols-Vijlbrief Vrije Universiteit Amsterdam, the Netherlands
REVIEW RETURNED	30-Nov-2018

GENERAL COMMENTS	Abstract: includes abbreviations, please remove. The conclusion does not state specifically what is the take home message, where should we start by implementing nutritional screening? What is the most important barrier to tackle in home care? please provide a clear answer to the aims in the intro. ethics: from the manuscript it is not clear is the participants consent to both recordings as well as using the quantitative data. Please describe more about the consent of participants. outcome: I would like to read some more background on the NoMad questionnaire, whether this is a validated questionnaire, and used in this specific target population and setting? What does the questionnaire measure, what are the different components in the questionnaire.. How can you interpret the scoring? etc. statistics: I would like to know more in depth about handling

	qualitative data. Who performed the interviews, what were the themes discussed? who transcribed, who coded, was this done by two independent researchers? NoMad seems not to include a continuous answer category that is the same for each question. But results show mean scores and differences. I wonder if the correct statistical approach is being used to handle these data. refs: maybe update with papers on process evaluation of complex interventions - BMJ 2015 moore et al.

REVIEWER	Massar Dabbous, Dr. Christine Baldwin, Dr. Elizabeth Weekes Massar Dabbous,PhD candidate, King's College London, UK Dr. Christine Baldwin, Lecturer in Nutrition & Dietetics, King's College London, UK Dr. Elizabeth Weekes, Senior Consultant Dietitian, Guy's & St Thomas' NHS Foundation Trust, UK
REVIEW RETURNED	21-Jan-2019

GENERAL COMMENTS	Review Comments: Implementing professional behaviour change in teams under pressure – results from phase one of a prospective process evaluation of a new procedure for screening and treatment of malnutrition in community care for older people (INSCCOPe). This is an interesting manuscript which considers an innovative new nutrition screening process within the community and uses Normalisation Process Theory to undertake an assessment of the implementation phase. The key weaknesses in our opinion relate to the inferences discussed without strong justification from the results, as well as poor reporting of the methods and results. Detailed comments by section are provided below: Title: The title includes the acronym 'INSCCOPe' but it is not clear either what this is or indeed how it relates to the title of this study. In fact, I didn't manage to work out what 'INSCCOPe' is referring to until nearly the end of the discussion when you indicate that it seems to be about moving from in-person to online. Some of this context needs to be added to the introduction and methods. Abstract: The results section of the abstract is vague and should specify key results found. Introduction: The aim of the study is clearly defined in the introduction which also explains the importance of nutrition screening in routine care and in a community setting and the complex processes of implementing new procedures, as well as description of the new screening procedures and role of normalisation process theory. 1. Evidence is required to justify setting up a "new procedure for screening and treatment of malnutrition in community care for older people", which can be elaborated on in the paragraph beginning line 56. In our view important references have been missed on the efficacy of nutritional screening in the community (Haslinda A et al BMC Fam Pract (2014) and Hamirudin AH et al Arch Gerontol Geriatri 2016), both of which report on implementation and outcomes of screening in a primary care setting). Critical appraisal of these will draw out any potential limitations in these publications which might provide a stronger rationale for the

	implementation of a new screening process in your setting. 2. The paragraph beginning line 37 (prevalence, impact and economic cost of malnutrition) is too long and detailed and should be summarised briefly with the focus on screening (as above) getting greater prominence . 3. Discussion of the authors' new procedure for nutritional screening should be part of the methods section rather than being described within the introduction. 4. Page 4, line 47 the word 'shoes' should be replaced with 'shows' 5. The aims and objectives are clearly defined; however, no detailed outcomes are described. Methods: The methods describe the sample selection, study procedures, and data analysis, however some elements require further detail: 1. While the flowchart of the nutrition screening procedure that is being evaluated is provided in the additional files, detailed description of the procedure is also important to include in this section before the discussion of the methods of its evaluation (INSCOPPe study description). At the end of reading the methods, it is not actually clear what this implementation process involved, was it a training initiative and if so when did the training happen (I assumed between T0 and T1). How did you select, who received training, and who didn't. There is no description of this. 2. The overall study procedures: NoMad questionnaire and telephone interviews require further elaboration (e.g. were the telephone interviews during the same period as the training period or different times?) 3. Details of the scoring method of the NoMad instruments should be added within the data analysis. At present there is an assumption that the reader knows this instrument which may be incorrect. Is this a validated tool? If so, there should be a reference to the validation study. The different domains which are drawn out in the analysis should be fully described in the methods. 4. The statistical methods are weak. Currently you indicate that Wilcoxon-Rank Sum tests are used to compare scores. Is this a test for non-parametric statistics and if so, would it not be better to report medians (IQR) and not means. Greater description of how NVIVO was used is required. Did you use NVIVO to manage the thematic analysis or to undertake the analysis. Results: The results section is where the study order becomes confusing, overall presentation of results is not clear, with many confusing tables surrounded by text. If the questionnaire used is described in more detail in the methods, this should suggest the different domains and hence headings for organisation of the results. 1. The tables of results would be better presented by the addition of the non-parametric median/ranges (if described as appropriate in the methods) and the addition of p-values. If, as it seems, there are few statistically significant results, a system of asterisks and footnotes might be sufficient This would also limit the narrative text and allow the tables to stand alone, showing the key findings. Note that it is not appropriate to provide a summary measure (mean or median) without an indication of the spread of data (SD or range). 2. The table legends should be improved so that they are fully descriptive of what is being presented. 3. Similarly, while the analysis of the qualitative data is informative, they are lost within large amounts of text.

	4. Improvement of the paragraph sub-headings may help with the organization (e.g. T1 results) Discussion: In this section, while there is a lot of results that were described within the results section, their discussion was weak. 1. It is customary to re-state the aim at the start of the discussion and to summarise the key findings. You only partially achieve this. 2. Strong 'generic' inferences and conclusions were made within the study discussion that required more evidence from the results. 3. The discussion focused on a main aspect of the results (barriers reported), while not discussing other elements of the results. All of the findings need thorough discussion. 4. While some attempt at discussing the study limitations was undertaken in the abstract, further important limitations should be mentioned that led to the conclusions of the study discussed including (low course attendance, therefore results looked at non-attendance, small sample size, the online aspect of the questionnaire).

VERSION 1 – AUTHOR RESPONSE

Dear reviewers,

Thank you for your time in review of this manuscript. We include responses to your comments below.

Kind regards,

Dr. Mike Bracher (on behalf of the INSCCOPe study team).

Reviewer Number (R) - Comment Number (C)	Reviewer comment	Authors' response
R1C1	This NPT informed quantitative prospective evaluation of use of nutritional screening in a community sample is excellent. Implementation of any new practice or procedure within the NHS is challenging and this is an excellent example of good practice eloquently described	Thank you; we are happy that you found the manuscript to be useful and well described.

R2C1	Abstract: includes abbreviations, please remove. The conclusion does not state specifically what is the take home message, where should we start by implementing nutritional screening? What is the most important barrier to tackle in home care? please provide a clear answer to the aims in the intro.	Re: abbreviations – these have been removed. Re: 'take home message' – we have made the following changes to the 'Conclusion' section of the abstract: 'Conclusion: Greater support appears necessary to fully implement and embed the new procedure, particularly around monitoring of training completion, and organisational support for nutrition screening and treatment activity. Findings also support and extend observations of previous studies regarding the importance of Collective Action and Reflexive Monitoring-type processes.'
R2C2	ethics: from the manuscript it is not clear is the participants consent to both recordings as well as using the quantitative data. Please describe more about the consent of participants.	The declarations section contains the statement: 'Ethical approval for the study has been granted through institutional ethical review'. We have also added the following to the 'Recruitment' sub-section of the 'Methods' section (additions in bold): Participants then completed an agreement form (indicating consent to use of survey and interview audio data by the study team), a participant data form, and the T0 NoMad instrument (paper based).

R2C3	outcome: I would like to read some more background on the NoMad questionnaire, whether this is a validated questionnaire, and used in this specific target population and setting? What does the questionnaire measure, what are the different components in the questionnaire.. How can you interpret the scoring? etc.	Re: validation of NoMad - we have added a further reference to the validation paper, which was under review at the time of original submission but has since become available – Finch TL, Girling M, May CR, et al. Improving the normalization of complex interventions: part 2 - validation of the NoMAD instrument for assessing implementation work based on normalization process theory (NPT). BMC Med Res Methodol 2018;18:135. doi:10.1186/s12874-018-0591-x Re: scoring method, reporting, and 'domains' – the results contain no domain-specific scores, and none were computed. Only answers to individual questions were calculated. NoMad questions are based on components and constructs of NPT, and so in reporting the individual questions these were grouped accordingly into separate tables for each construct and its constituent components. We have added the following sentence to the 'Data analysis' paragraph, within the 'Data collection, management and analysis' sub-section of the 'Methods' section: NoMad results contain no domain-specific scores, and only answers to individual questions were calculated. Re: relationship between theory components and NoMad - we have also expanded table 1 to describe the relationship between individual questions and NPT constructs, which are described as follows: Coherence - 'The sense-making work that people do individually and collectively when they are faced with the problem of operationalizing some set of practices'. Cognitive participation - 'The relational work that people do to build and sustain a community of practice around a new technology or complex intervention.' Collective action - 'The operational work that people do to enact a set of practices, whether these represent a new technology or complex healthcare intervention.' Reflexive monitoring - 'The appraisal work that people do to assess and understand the ways that a new set of practices affect them and others

		around them.’

R2C4	statistics: I would like to know more in depth about handling qualitative data. Who performed the interviews, what were the themes discussed? who transcribed, who coded, was this done by two independent researchers? NoMad seems not to include a continuous answer category that is the same for each question. But results show mean scores and differences. I wonder if the correct statistical approach is being used to handle these data.	Re: handling of qualitative data including transcription – we have added the following to the 'Data analysis' paragraph of the 'Data collection, management, and analysis' sub-section of the 'Methods' section (including an accompanying flow diagram, see figure 2): Interviews were performed by one researcher (MB), and audio data sent to an external transcription service immediately upon completion (all interviews were returned within 14 days of submission). Upon receipt of the interviews, data integrity checks were performed by one researcher (MB), which involved reading the entire transcript along with the audio recording to ensure congruence between the two. This also served as a familiarisation procedure prior to initial deductive thematic analysis, where initial themes relating to specific components of NPT and linked questions within the NoMad survey were identified by one researcher (MB). Emerging content of these themes were then discussed at group meetings with all co-authors (MB, JM, KW, KS, CRM), the aims of which were to agree relevance of identified material to individual themes (e.g. whether an interview extract applied to a specific NPT construct, and/or whether it may be relevant to other constructs). Following group discussion, amendments were made as necessary. This process repeated across three team meetings as interviews were completed (following the constant comparative approach), with themes agreed at the final meeting following completion of all interviews (a flowchart detailing this process is given in Figure 2). Further detail on the transcription process is described 'under the 'Data Collection and Storage' sub-section of the 'Methods' section as follows: 'For transcription, files were sent using a secure drop off-service, to a transcription service with which the study team had a confidentiality and nondisclosure agreement.' Re: involvement of co-authors in development of themes – we have added the following to the 'Data analysis' subsection of the 'Methods' section: 'Thematic analysis was conducted by one researcher, and emerging themes discussed at group meetings with co-authors (JM, KW, KS, CRM) throughout the process.' Re: NoMad answer categories not having the same answer categories: Q1-3 use a 0-10 ordinal scale, with Q4-23 using a 1-5 ordinal (Likert type) scale, with answers 6-8 to categorise different forms of 'Not applicable' type responses. As indicated in the table 1 caption, Q1-3 results are not reported in this article.

		Re: mean scores and differences for ordinal data – we have added the following to the 'Data analysis' paragraph of the 'Data collection, management, and analysis' sub-section of the 'Methods' section, including additional references that appear below Mean scores with accompanying standard deviations are here reported for Q4-23. The decision to report NoMad results as mean values rather than medians was taken for two reasons. Firstly, computing the mean value gives a more precise indication of the direction of response (e.g. for a distribution of scores where the mean = 2.5 and the median = 2, the former provides meaningful additional detail indicating direction closer to neutral response than is visible from reporting of the median score). Secondly, reporting to one decimal place provides a more detailed basis for the colour gradient used to aid interpretation of results tables (that is, the intensity of colour is linked to the tendency towards the response, i.e. strongly agree (blue), neither agree nor disagree (white), strongly disagree (yellow)). Neutral colours were chosen due to the mixed direction of NoMad questions (i.e. agreement with statements does not always indicate a desirable response) – details on colour interpretation are given in the legends for tables 3-6. Further exploration of methodological literature was undertaken to confirm appropriateness of this approach for analysis of likert-type data [33,34]. Norman G. Likert scales, levels of measurement and the 'laws' of statistics. Adv Heal Sci Educ 2010;15:625–32. doi:10.1007/s10459-010-9222-y Sullivan GM, Artino ARJ. Analyzing and Interpreting Data From Likert-Type Scales. J Grad Med Educ 2013;:541–2. We report responses to individual questions, which map to specific components of NPT. We do this to be consistent with the use of the theory (that is, to identify specific processes that promote or inhibit implementation and normalization). As indicated above in the response to R2C3 we have expanded to table 1 to make the link between individual constructs and main components of the theory explicit. In response to R3C14 (see below) we have also included standard deviations and ranges for all mean scores within the tables in the revised manuscript.

R2C5	refs: maybe update with papers on process evaluation of complex interventions - BMJ 2015 moore et al.	We have added the suggested reference in addition to the following systematic review of use of NPT in planning and evaluation of complex interventions to 'The Role of Normalisation Process Theory (NPT)' section of the 'Background' section: May CR, Cummings A, Girling M, et al. Using Normalization Process Theory in feasibility studies and process evaluations of complex healthcare interventions: a systematic review. Implement Sci 2018;13:80. doi:10.1186/s13012-018-0758-1
R3C1	This is an interesting manuscript which considers an innovative new nutrition screening process within the community and uses Normalisation Process Theory to undertake an assessment of the implementation phase. The key weaknesses in our opinion relate to the inferences discussed without strong justification from the results, as well as poor reporting of the methods and results.	Thank you for your attention to this review. We address specific points raised in the rows below.
R3C2	The title includes the acronym 'INSCCOPe' but it is not clear either what this is or indeed how it relates to the title of this study. In fact, I didn't manage to work out what 'INSCCOPe' is referring to until nearly the end of the discussion when you indicate that it seems to be about moving from in person to online. Some of this context needs to be added to the introduction and methods.	Thank you for pointing this out – we have added the following to the 'Aims and objectives' section: 'The process evaluation was entitled: Implementing Nutrition Screening in Community Care for Older People (INSCCOPe).'
R3C3	The results section of the abstract is vague and should specify key results found.	The main findings in relation to each area of investigation are reported as indicated below: 'High levels of support were shown for nutrition screening and treatment activity among participants, as well as areas of concern in relation to logistical and organisational support. Interviews indicated access to specialist dietetic support as a concern. Results indicated a positive impact of training on knowledge of the new procedure; however, most implementation measures saw no significant changes between time points or between sub-groups (training participants vs. non-participants). Implementation barriers included: high levels of training non-completion; vulnerability to attrition of trained staff; lack of monitoring of post-intervention compliance; lack of access to

		specialist nutritional support.' In addition, please see the above answer to R2C1 re: changes to the 'Conclusion' section of the abstract.

R3C4	(Introduction) 1. Evidence is required to justify setting up a "new procedure for screening and treatment of malnutrition in community care for older people", which can be elaborated on in the paragraph beginning line 56. In our view important references have been missed on the efficacy of nutritional screening in the community (Haslinda A et al BMC Fam Pract (2014) and Hamirudin AH et al Arch Gerontol Geriatri 2016), both of which report on implementation and outcomes of screening in a primary care setting). Critical appraisal of these will draw out any potential limitations in these publications which might provide a stronger rationale for the implementation of a new screening process in your setting.	Thank you for highlighting these publications. We have included them within the manuscript and amended the text as follows within the sub-section 'A new procedure for screening and treatment of malnutrition (the intervention)' in the 'Background' section: There is good evidence to suggest that nutrition screening of older people living in the community together with appropriate intervention and monitoring improves their nutritional status [21]. Health care staff providing care and treatment within community settings (in both physical and mental healthcare) who already review and manage older people, are well placed to perform routine nutrition screening as part of practice (and in accordance with guidelines from the UK National Institute for Clinical Excellence (NICE)) [9,22]. The feasibility of introducing a validated screening tool and nutrition resource kit has been shown in older adults attending general practices in an Australian study [23]. In the UK, local protocols concerning nutritional screening and assessment often exist within National Health Service (NHS) hospital trusts, based on national protocols. However, previous service development work around nutrition in the community indicates that it is often not considered a routine part of interactions with older people [24].

R3C5	(Introduction) 2. The paragraph beginning line 37 (prevalence, impact and economic cost of malnutrition) is too long and detailed and should be summarised briefly with the focus on screening (as above) getting greater prominence.	We have revised and condensed this paragraph as follows: In this paper, we use the term 'malnutrition' to refer to 'undernutrition' [13,14]. More than 3 million individuals are estimated to be malnourished or at risk of malnutrition in the UK, the majority (93%) living in the community [15,16], of which over one million are over the age of 65 [17]. Malnutrition has many negative consequences that both affect the individual and impose a strain on health-care resources through delayed recovery from illness, increased need for health care provision at home, more frequent visits by nurses, and a greater number of hospital admissions [10,14,18]. Evidence suggests that malnutrition in older people can be prevented through screening and early intervention, and that the benefits of treating malnutrition far outweigh the costs [19].
R3C6	(Introduction) 3. Discussion of the authors' new procedure for nutritional screening should be part of the methods section rather than being described within the introduction.	This comment raises an interesting issue regarding the visibility of the division of labour between those implementing the intervention (in this case, nurses and dietitians within community teams) and those conducting the process evaluation (in this case, the INSCCOPe study team). There is often considerable overlap, the degree of which can vary greatly between studies (from not being able to discern a difference at all, to explicit divisions and relationships between the two groups – e.g. those conducting the evaluation providing interim findings to

		implementers in order to derive further development of the intervention – see https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0116629). This study tends towards the latter type of labour division, and as such the intervention (i.e. the new procedure) is best described as an object of study rather than a method and has therefore been reported within the introduction section. However, in light of this comment we have added the following sub-section to the 'Background' section in order to clarify the relationship between the work of implementation and process evaluation in this study: The relationship between implementation of the new procedure and the process evaluation Complex relationships and divisions of labour often exist between those implementing service development in healthcare, and those evaluating these processes [29]. In some cases, both kinds of work are undertaken by the same people [11], while in others the process evaluation may be undertaken by those not involved in either initial development or implementation of the intervention [30]. In both cases, findings from process evaluations commonly inform ongoing development of implementation strategies for the intervention in focus [25]. It is therefore necessary to define the relationship between these two kinds of work within the project reported in this paper. Implementation and embedding ('normalization') of the new procedure for screening and treatment of malnutrition was the focus of this process evaluation. Development and implementation of the procedure was led by KS with input from AA and other colleagues within the implementation site (see Additional File 1). Process evaluation work was undertaken primarily by MB, JS, KW and CRM, with input from KS and AA relating to recruitment strategy. Findings from the process evaluation were provided to the procedure development and implementation team following completion of T1 data collection, to inform ongoing development.
R3C7	(Introduction) 4. Page 4, line 47 the word 'shoes' should be replaced with 'shows'	Thankyou – this has been actioned.

R3C8	(Introduction) 5. The aims and objectives are clearly defined; however, no detailed outcomes are described.	Similarly to R3C6, this again raises an interesting issue in terms of identification of outcomes for the intervention (e.g. numbers of patients screened, outcomes of care planning etc., indicators of nutritional health of patients) and the outcomes affecting implementation (that is, identifiable processes or factors that promote or inhibit normalization of the new procedure as a routine part of practice). To clarify this in the paper, we have added the following to the 'Aims and objectives' section: Outcomes relating to clinical effectiveness of the new procedure were assessed by the procedure development and implementation team and will be reported separately. Outcomes relating to specific processes affecting implementation and embedding are the focus of this process evaluation, and methods for their investigation are now described. We have also added the following to the 'NoMad questionnaire' sub-section of the 'Methods' section: NoMad provides a measure of the constructs of NPT in terms of their constituent components, indicating degree of success in relation to specific aspects of implementation (see table 1). This facilitates comparison across time points and between sub-groups, and provides a basis for exploring experiences of respondents in more detail through telephone interviews (described in the following section).
R3C9	(Methods) 1. While the flowchart of the nutrition screening procedure that is being evaluated is provided in the additional files, detailed description of the procedure is also important to include in this section before the discussion of the methods of its evaluation (INSCOPPe study description). At the end of reading the methods, it is not actually clear what this implementation process involved, was it a training initiative and if so when did the training happen (I assumed between T0 and T1). How did you select, who received training, and who didn't. There is no description of this.	Re: level of detail in procedure description – Implementation of the procedure described in the additional document is the object of the process evaluation study. The task of the process evaluation team is therefore to describe the new procedure as fully as possible. This has been presented in the 'A new procedure for screening and treatment of malnutrition' section of 'Introduction' section. In addition, the full documentation of the new procedure is reported in 'Additional File 1 – New Procedure'. Re: implementation process and timing of training – this is described as follows in the 'Methods' section of the abstract: '…prior to implementation of training, baseline (T0 – survey and telephone interview), and 2

		months following training (T1 – follow-up survey)…' And again in the 'Study procedures' subsection of the methods section:

		'Data collection for phase one occurred at baseline (T0 – pre-implementation of procedure and training), and approximately 2-3 months following completion of training (T1).' Re: selection of staff for training – this is described in the document as follows at the bottom of the third paragraph under sub-section 'A new procedure for screening and treatment of malnutrition' of the 'Introduction' section of the main document: 'Introduction of the new procedure was provided through staff training delivered by a registered dietitian. 12 sessions were offered to enable as many staff as possible to attend a one-hour training session.' On page 2 of Additional File 1 – as follows: 'Target audience – all staff in integrated community teams'. And On page 12 of Additional File 1, section 6.1 as follows: 'All staff will receive training on nutritional care and management and assessment of their competences to ensure they have the appropriate skills needed to ensure that patients' nutritional needs are met.'
R3C10	(Methods) 2. The overall study procedures: NoMad questionnaire and telephone interviews require further elaboration (e.g. were the telephone interviews during the same period as the training period or different times?)	Please see answer to R3C9 re: the description of observation points.
R3C11	(Methods) 3. Details of the scoring method of the NoMad instruments should be added within the data analysis. At present there is an assumption that the reader knows this	Re: validation and scoring – please see our reply to R2C3 above.

	instrument which may be incorrect. Is this a validated tool? If so, there should be a reference to the validation study. The different domains which are drawn out in the analysis should be fully described in the methods.	
R3C12	(Methods) 4. The statistical methods are weak. Currently you indicate that Wilcoxon-Rank Sum tests are used to compare scores. Is this a test for non-parametric statistics and if so, would it not be better to report medians (IQR) and not means. Greater description of how	The Wilcoxon rank sum and signed rank tests are intended for non-parametric data, and are appropriate for analysis of likert-derived ordinal data (as indicated by the source below). In addition, these analytical methods were declared as such in the study protocol, which has recently been accepted after passing peer review, and is currently in press with BMJ Open.

	NVIVO was used is required. Did you use NVIVO to manage the thematic analysis or to undertake the analysis.	Field A. Discovering Statistics Using IBM SPSS Statistics. SAGE Publications 2013. https://books.google.co.uk/books?id=srb0a9fmMEoC Re: means and standard deviations – please see R2C4 above. Re: Nvivo use – Nvivo is software that acts as a tool for qualitative analysis. It does this by allowing the user to attach labels (or 'codes') to text, audio, video or image data. It also includes procedures for exploring associations between these codes. It is therefore best described as a tool for data management rather than analysis (that is, a statistical package such as SPSS actually performs the analytical procedure and related calculations; Nvivo provides a tool for the user who performs the qualitative analysis – in this case, in a theory-led deductive manner). In order to clarify this, we have added the following to the 'Data analysis' subsection of the 'Methods' section: Nvivo allows the user to attach labels (or 'codes') to text, audio, video or image data, and provides a tool for data management through which deductive thematic analysis can be conducted by a competent user. In this study, a list of codes was established based upon the NPT framework described above and used to identify relevant portions of the audio and transcription data. Description of the process for analysis of qualitative data has also been expanded in response to R2C4 (see above).

R3C13	(Results) The results section is where the study order becomes confusing, overall presentation of results is not clear, with many confusing tables surrounded by text. If the questionnaire used is described in more detail in the methods, this should suggest the different domains and hence headings for organisation of the results.	The rationale for organisation into components of NPT (and the lack of domain scores) has been addressed in our response to R2C3. Full guidance for interpretation of results – including the colour scheme used, are already given at the bottom of each table.
R3C14	(Results) 1. The tables of results would be better presented by the addition of the non-parametric median/ranges (if described as appropriate in the methods) and the addition of p-values. If, as it seems, there are few statistically significant results, a system of asterisks and footnotes might be enough. This would also limit the narrative text and allow the tables to stand alone, showing the key findings. Note that it is not appropriate to provide a summary measure (mean or median) without an indication of the spread of data (SD or range).	Please see our responses to R2C3 and R2C4 above.

R3C15	(Results) 2. The table legends should be improved so that they are fully descriptive of what is being presented.	All table functions are described (that is, the directional nature of the scoring is reported under each table, as is guidance on interpretation of the colour gradient). The additions made to table 1, described in R2C3 are also relevant in making the relationship between individual questions and NPT constructs more explicit.
R3C16	(Results) 3. Similarly, while the analysis of the qualitative data is informative, they are lost within large amounts of text.	To improve the readability of this section, we have placed illustrative quotes in Box 1 within the ‘Baseline (T0)’ sub-section of the ‘Results’ section.
R3C17	(Results) 4. Improvement of the paragraph sub-headings may help with the organization (e.g. T1 results)	Thank you, we have done this – sub-headings are given for both ‘Baseline (T0)’ (p.7), ‘Training Outcomes’ (p.10), and ‘T1 results’ (p.10). Each of the two observation points contain further subheadings describing key points of reporting (e.g. ‘Results for NoMad responses within the ‘Coherence’ construct (Q4-7).’).

R3C18	(Discussion) 1. It is customary to re-state the aim at the start of the discussion and to summarise the key findings. You only partially achieve this.	We have added the following introductory sentence to the main paragraph: The aim of the INSCCOPe study was to undertake a process evaluation of the implementation of the screening procedure and its associated training and identify factors that promote or inhibit embedding of nutritional screening as a routine aspect of care. We have also amended the opening paragraph of the 'Discussion' section as follows: Study findings indicate that staff value nutrition screening and treatment activity and are open to new ways of working (indicating favourable conditions relating to the Internalisation and Relational integration components of NPT). In addition, the training provided is effective in improving knowledge of the new procedure. However, participant responses highlighted lack of institutional support for nutrition screening (Contextual integration), as well as the absence of a 'key' person to support and drive forward service development (Initiation), indicating that significant barriers to implementation remain. Implications of these findings and recommendations for addressing barriers are discussed, in addition to wider implications for implementation of service developments in community settings.

R3C19	(Discussion) 2. Strong 'generic' inferences and conclusions were made within the study discussion that required more evidence from the results.	We have addressed this concern in our responses to R3C18, and R3C20 below.

R3C20	(Discussion) 3. The discussion focused on a main aspect of the results (barriers reported), while not discussing other elements of the results. All of the findings need thorough discussion.	We have added the following additional discussion of facilitators (i.e. findings that indicate factors conducive to successful implementation) to the 'Discussion' section: NoMad responses mapping to the NPT construct of Cognitive participation indicate conditions conducive to building and sustaining a community of practice around nutrition screening and treatment. Findings (T0 and T1) indicate that staff view such work as a legitimate part of their role (Q9, Enrolment), are open to working with colleagues in new ways in relation to it (Q10, Legitimation), and will continue to support further development in this area (Q11, Activation). In addition, responses (both T0 and T1) indicate that both baseline arrangements for nutrition screening and treatment, as well as the new procedure, and can be easily integrated into existing work (Q12, Interactional workability). Between T0-T1, there was a shift in average scores towards 'neither agree nor disagree' and away from 'strongly agree' in relation to perceptions of disruptiveness of nutrition screening and treatment for working relationships (Q13, Relational integration). This shift was significant for non-training participants (p=0.02) and approached significance for training participants (p=0.07), indicating that implementation may have had some effect on staff perceptions of the effect of nutrition screening and treatment on working relationships. However, mean scores for both groups at T1 (2.1 for training, 2.4 for non-training) indicate that many participants still see this activity as disruptive to working relationships. In addition, we have expanded the paragraph discussing barriers to make more explicit links to the findings section (as below): Results indicate several challenges to the current implementation design: firstly, non-completion of training (44% of total staff (n=223) did not complete). Concerns regarding time and resource constraints for nutrition screening and treatment activity (see Q17, table 5; and Box 1) were indicated in both NoMad (T0 & T1) and interview responses. Furthermore, experiences of the study team in recruitment to telephone interview indicated a number of participants who declined to participate, or agreed and then were forced to withdraw, in both cases due to changes in

		workload (see Additional File 2). These observations are indicative of the changeable demands that characterise community team working environments, and can be expected to

		affect attendance at in-person training sessions that are non-mandatory. Secondly, the working environment also includes significant attrition of key staff; 12 participants left post between T0T1, of which four were team leads. This risks reduction in numbers trained in the new procedure, as well as key people able to monitor compliance and provide appropriate support (i.e. team leads). Thirdly, the effect of staff attrition on overall procedure compliance may be compounded by lack of monitoring of training (i.e. while pre-post knowledge checks were taken, no procedures for monitoring ongoing compliance currently exist). Fourthly, concerns about institutional support for nutrition screening and treatment activity (as indicated through interviews and responses to dietetic survey questions) persisted after introduction of the procedure through training. This indicates that further attention is

		necessary to Contextual integration processes, specifically the support provided by management for nutrition screening and treatment activity, and how this is made available to staff working in community teams.
R3C21	(Discussion) 4. While some attempt at discussing the study limitations was undertaken in the abstract, further important limitations should be mentioned that led to the conclusions of the study discussed including (low course attendance, therefore results looked at nonattendance, small sample size, the online aspect of the questionnaire).	Re: low course attendance – again, this raises an interesting point in relation to intervention outcomes as distinct from process evaluation outcomes. Low course attendance is a limitation of/challenge for, implementation of the procedure, which is the object of study; it is clearly therefore an issue but not a methodological limitation of the process evaluation per se. The expanded discussion of barriers in the 'Discussion' section now makes this more explicit (see R3C20 above). Re: results looking at non-attendance – The amended discussion of facilitators in the 'Discussion' section now contains the following additional discussion in relation to the non-training (nonattendance) group: Between T0-T1, there was a shift in average scores towards 'neither agree nor disagree' and away from 'strongly agree' in relation to perceptions of disruptiveness of nutrition screening and treatment for working relationships (Q13, Relational integration). This shift was significant for non-training participants (p=0.02) and approached significance for training participants (p=0.07), indicating that implementation may have had some effect on staff perceptions of the effect of nutrition screening and treatment on working relationships. However, mean scores for both groups at T1 (2.1 for training, 2.4 for non-training) indicate that many participants still see this activity as disruptive to working relationships. Re: sample size – the following comment appears in the 'Strengths and Limitations' section:

		'Lack of quota sample due to lack of data on workforce composition may mean that sample is unrepresentative of the role/seniority profile of the target population.' Re: 'the online aspect of the questionnaire' – we have amended the 'Recruitment' sub-section of the 'Methods' section as follows: 'Prior to an in-person invitation to participate in the study by the researcher (MB), potential participants (n=89) were sent a Participant Information Sheet with contact details for the research team, circulated by team leads who received it via email. Potential participants were then approached at a team meeting by the researcher (MB), at a time agreed with the team lead, where the study was introduced, and participants' questions answered. Participants were informed of their right to withdraw at any stage without negative consequences, and without giving a reason. Participants then completed an agreement form, a participant data form, and the T0 NoMad instrument [paper based].'

VERSION 2 – REVIEW

REVIEWER	Rachel van der Pols-Vijlbrief Vrije Universiteit, Amsterdam, The Netherlands
REVIEW RETURNED	05-Mar-2019

GENERAL COMMENTS	General - This is a very relevant study, highlighting a new and important subject. It is very difficult to optimally implement screening and treatment of undernutrition in this setting with personnel under enormous workload and changing staff. - The whole piece may be shortened - more concise. Many words are used to explain the methods and thus the piece becomes unreadable. Please use consistent term throughout the whole document (e.g. barriers or inhibitors and promotors vs. facilitators). Use less information between brackets - only mention the information needed to understand the example or sentence. - Please always mention abbreviations the first time mentioned in the paper. - Abstract does not contain information to be a stand alone abstract. Please make sure to only mention the information needed to understand the aims, the methods used and the results/conclusions (answer the aims in the conclusion).

	pg. 3 line 36 --> what new procedure do you mean? Please be more clear? pg. 3 lines 45-46 not clear - use the same terms throughout the document Pg 3. lines 42 --> what do you mean? definition of malnutrition/undernutrition - do you mean protein energy malnutrition? or is micronutrient deficiencies included in the definition? p4. lines 9 t/m 32 --> to method section? p5 lines 2-15 --> to method section? p5 lines 45-52 shorten - too much details. p5 line 56 --> what questionnaires? be more specific p7 18 t/m 30 too much discussion. Keep methods section clear without fuss. Explanation of choices need to be discussed in the discussion section. pg8 table 2: N is not mentioned in the column interview. Conclusion: pay more emphasis to the very important conclusions - you do this at the end, but in the conclusions you do not provide a clear answer 1-2 sentences to the questions raised in the aim of your study. Mention the important inhibitors and facilitators Provide suggestions for future studies, not only practical implications. For instance it would be interesting to perform interviews with the management of community service/ home care organizations. Because they are the decisionmakers. The references are a mess. Please structure, use new references and use the same annotated structure. (specifically nr. 7-9, 13-16) Please always use dates when website accessed.

REVIEWER	Dr. Christine Baldwin, Dr. Elizabeth Weekes, Massar Dabbous Dr. Christine Baldwin, Lecturer in Nutrition & Dietetics, King's College London Dr. Elizabeth Weekes, Senior Consultant Dietitian, Guy's and St. Thomas' NHS Foundation Trust Massar Dabbous, PhD candidate, King's College London
REVIEW RETURNED	08-Mar-2019

GENERAL COMMENTS	Review Comments: Implementing professional behaviour change in teams under pressure – results from phase one of a prospective process evaluation of a new procedure for screening and treatment of malnutrition in community care for older people (INSCCOPe). Thank you for your responses to the comments and for making the necessary changes which has made the manuscript very interesting to read. In our opinion a few comments remain to be highlighted, which mainly relate to the justification of the result and discussion sections. Title: Thank you for clarifying the INSCCOPe title within the 'Aims and objectives' section, however this should also be in the Title of your manuscript for consistency and clarity that the study will be discussing implementation of INSCCOPe. Introduction:

	The addition of the references and organization of this section has improved enormously but remains lacking with respect to the justification on the reasons why it is necessary to introduce and implement a new process, justifying why you chose to implement a new procedure. While the details around existing organisational policy discussed in page 4 paragraph beginning line 9 thoroughly explains the procedure updates, additional detailed evidence surrounding what prompted this, what is currently happening or not happening in practice and an elaboration on the previous service development work discussed in page 4/line 1 (reference 23) may be interesting to justify this aim. Results and discussion: The main gaps within these two sections relate mainly to the linkage between what is reported in the results and what is discussed. - There are important results that come out when going through this section relating to the differences or lack of differences between training participants and non-training participants that should be highlighted and discussed further. Furthermore, results indicate non-significant changes between NoMad T0-T1 responses within tables 3-5, within both training participants and non-training participant groups which signify important results to present and discuss on the effect of training and not causing change. There is a point that should also be discussed further regarding the low attendance of training sessions (page 11 /line 56- 60% of staff did not complete the training). - Take care not to over emphasise statistical significance. Phrases referring to “approaching significance” should be removed as they could be mis-leading. - While your responses highlight the limitations of the implementation of the new procedure, limitation of the study design should also be discussed. - The recommendation highlighting the delivery of training through the e-portal is generic, support from the results is needed for why this point is recommended. It seems that the real result of this implementation is that despite positive attitudes to nutritional management of patients from staff, the service that you implemented didn’t actually produce the result that might have liked. The obvious follow-on from this seems to us to not be to appoint a new member of staff or to implement e-training but to explore the reasons why training failed. It seems more likely that it is a failure to understand the importance of the management of malnutrition and to prioritise it in patient management that is likely to be an issue.

VERSION 2 – AUTHOR RESPONSE

Dear reviewers, Thank you for your time in review of this manuscript. We include responses to your comments below. Kind regards, Dr. Mike Bracher (on behalf of the INSCCOPe study team).		
Reviewer Number (R) - Comment	Reviewer comment	Authors' response

Number (C)		
R2C1	This is a very relevant study, highlighting a new and important subject. It is very difficult to optimally implement screening and treatment of undernutrition in this setting with personnel under enormous workload and changing staff. The whole piece may be shortened - more concise. Many words are used to explain the methods and thus the piece becomes unreadable. Please use consistent term throughout the whole document (e.g. barriers or inhibitors and promotors vs. facilitators). Use less information between brackets - only mention the information needed to understand the example or sentence	Thank you – we appreciate your comments and are pleased that you found the revised study to be of value. Re: length of the piece – we appreciate that this study is described in some detail. Where we have been able to make amendments to reduce the size of this in line with specific comments we have done so. We have had to balance a range of specific comments requesting elaboration with concision, and we hope that the comments below reflect that adequately. One of the difficulties in writing a study involving multiple methods in complex healthcare settings for a wide-ranging audience, is that points of detail which may not seem relevant to some readers are requested by others, and where this has happened in this case we have tried to make it explicit in our responses. In addition, after implementing our responses to all comments below, the entire article was subjected to further copy editing prior to submission, resulting in a 10% further reduction in word count compared with the first draft of this resubmission.
R2C2	Please always mention abbreviations the first time mentioned in the paper.	Thankyou. The acronym 'GP' is now defined as 'General Practitioner' on first appearance; all other acronyms have been checked and are defined on first appearance.
R2C3	Abstract does not contain information to be a stand alone abstract. Please make sure to only mention the information needed to understand the aims, the methods used and the results/conclusions (answer the aims in the conclusion).	Thank you – we have amended the abstract as follows: Objectives: To evaluate implementation of a new procedure for screening and treatment of malnutrition for older people in community settings; to identify factors promoting or inhibiting its implementation as a routine aspect of care. Design: Prospective process evaluation using mixed methods with pre/post-implementation measures. Setting and participants: Community teams (nursing and allied health professionals) within a UK National Health Service Community Trust. 73 participants were recruited, of which 32 completed both pre and post-implementation surveys. Main outcome measures: NoMad survey for pre-post intervention measures; telephone interviews exploring participant experiences and wider organisational/contextual processes. Methods: Data prior to implementation of training, baseline (T0 – survey and telephone interview), and 2 months following training (T1 – follow-up survey). Quantitative data described using

		frequency tables reporting team type, healthcare provider role group, and total study sample; analysis using Wilcoxon rank-sum (sub-group comparison) and Wilcoxon signed-rank (within-group observation point comparison) tests. Qualitative interview data (audio and transcription) analysed through directed content analysis using Normalization Process Theory. Results: High support for nutrition screening and treatment indicated by participants. Concerns expressed around logistical, organisational, and specialist dietetic support. Pre-post training measures indicated a positive impact of training on knowledge of the new procedure; however, most implementation measures saw no significant changes between time points or between sub-groups (training participants vs. non-participants). Implementation barriers included: high levels of training non-completion; vulnerability to attrition of trained staff; lack of monitoring of post-intervention compliance; lack of access to dietetic support. Conclusion: Greater support necessary to support implementation in relation to monitoring of training completion, and organisational support for nutrition screening and treatment activity. Recommended changes to implementation design are: appointment of a key person to support and monitor procedure compliance; adoption of training as an e-learning module within the existing organisational platform to increase participation in changeable working conditions.
R2C4	pg. 3 line 36 --> what new procedure do you mean? Please be more clear?	The sentence has been changed the following: 'This paper contributes to understanding implementation of professional behaviour change in community settings, by presenting results from the implementation phase of a new malnutrition screening and care procedure for community teams working with older people.'
R2C5	Pg. 3 lines 45-46 not clear - use the same terms throughout the document	With reference to the term' malnutrition', how we have used the term 'malnutrition' has been stated (also see R2C6) and used the term 'malnutrition' throughout (not 'undernutrition').
R2C6	Pg. 3 lines 42 --> what do you mean? definition of malnutrition/undernutrition - do you mean protein energy malnutrition? or is micronutrient deficiencies included in the definition?	We are using BAPEN's definition of malnutrition [13] and have provided this clarification in the document as follows: In this paper, we use the term 'malnutrition' to refer to 'undernutrition' although the term 'malnutrition' can encompass both overnutrition/obesity and undernutrition [13,14]. Malnutrition is defined as a

		state in which a deficiency, excess or imbalance of energy, protein and other nutrients causes measurable adverse effects on tissue/body form (body shape, size and composition), function or clinical outcome [15]. .
R2C7	Pg. 4 lines 9 t/m 32 --> to method section?	Thankyou – this issue was raised by reviewer 3 in the previous resubmission, and our response (appearing in the original resubmission in response to (R3C6) is restated below. This comment raises an interesting issue regarding the visibility of the division of labour between those implementing the intervention (in this case, nurses and dietitians within community teams) and those conducting the process evaluation (in this case, the INSCCOPe study team). There is often considerable overlap, the degree of which can vary greatly between studies (from not being able to discern a difference at all, to explicit divisions and relationships between the two groups – e.g. those conducting the evaluation providing interim findings to implementers in order to derive further development of the intervention – see https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0116629). This study tends towards the latter type of labour division, and as such the intervention (i.e. the new procedure) is best described as an object of study rather than a method and has therefore been reported within the introduction section. However, in light of this comment we have added the following sub-section to the 'Background' section in order to clarify the relationship between the work of implementation and process evaluation in this study: The relationship between implementation of the new procedure and the process evaluation Complex relationships often exist between those implementing service development in healthcare, and those evaluating these processes [29]. In some cases, both kinds of work are undertaken by the same people [11], while in others the process evaluation may be undertaken by those not involved in either initial development or implementation of the intervention [30]. In both cases, findings from process evaluations commonly inform ongoing development of implementation strategies for the intervention in focus [25]. It is therefore necessary to define the

		relationship between these two kinds of work within the project reported in this paper. Implementation and embedding ('normalization') of the new procedure for screening and treatment of malnutrition was the focus of this process evaluation. Development and implementation of the procedure was led by KS with input from AA and other colleagues within the implementation site (see Additional File 1). Process evaluation work was undertaken primarily by MB, JS, KW and CRM, with input from KS and AA relating to recruitment strategy. Findings from the process evaluation were provided to the procedure development and implementation team following completion of T1 data collection, to inform ongoing development.
R2C8	Pg. 5 lines 2-15 --> to method section?	Please see our response to R2C7 above
R2C9	Pg.5 lines 45-52 shorten - too much details.	We appreciate that the details here may seem mundane, but for the current paper they are relevant. As reviewer 2 notes in R2C1, this study takes place in the context of highly changeable circumstances, meaning that detail in how teams were approached and participants recruited is essential in understanding how it addressed those complexities. The steps for approach described here are consistent with the level of detail necessary for readers to see how participation was obtained in these circumstances (particularly for readers who may be interested in using this paper to inform future studies of this type).
R2C10	Pg. 5 line 56 --> what questionnaires? be more specific	Thankyou - this has been changed to 'NoMad questionnaires'.
R2C11	Pg. 7 18 t/m 30 too much discussion. Keep methods section clear without fuss. Explanation of choices need to be discussed in the discussion section.	As we indicate in our response to R2C9, while these details may seem mundane, they are important in the context of investigations of complex healthcare systems. The detail here provided described the rationale for telephone interviews – i.e. to explore the congruence of beliefs/attitudes and actions/experiences, and to be adaptable enough to cope with the complex and changeable study setting. This relevance of these details is clearly demonstrated by descriptions of telephone responses, the recruitment and data collection process for telephone interview described in Additional File 2.

R2C12	Pg.8 table 2: N is not mentioned in the column interview.	Thank you – this has been added.
R2C13	pay more emphasis to the very important conclusions - you do this at the end, but in the conclusions you do not provide a clear answer 1-2 sentences to the questions raised in the aim of your study. Mention the important inhibitors and facilitators	Thankyou – the following has been added to the conclusion: Guided by Normalization Process Theory, we have explored factors promoting implementation and embedding of the new procedure (i.e. staff understanding of the effectiveness, legitimacy, and appropriateness of the intervention). In addition, we have highlighted aspects of the implementation field presenting challenges to implementation (i.e. non-completion of training, staff attrition, lack of ongoing monitoring for procedure compliance, concerns around institutional support for nutrition screening and treatment activity).
R2C14	Provide suggestions for future studies, not only practical implications. For instance it would be interesting to perform interviews with the management of community service/ home care organizations. Because they are the decisionmakers.	Thank you – the suggested focus is one which is directly relevant to the study here and links to previous work using NPT in adjacent settings (i.e. care homes). We have renamed the 'Implications' sub-section of 'Discussion' as 'Implications and future directions', and the following has been added at the end: Turning specifically to implementation in community settings, further empirical study of involvement of key decision makers at higher levels of governance is an important focus. In the INSCCOPe study, a majority (66%) of NoMad respondents at T0 strongly/disagreed with the statement 'Management adequately supports screening and treatment for malnutrition' (Q18, see table 5), a finding which persisted at T1. Previous work in other settings by Bamford et al. (2012) has also highlighted the importance of senior management support for implementation of nutritional care interventions within residential care homes [12]. While studies such as INSCCOPe contribute to understanding of implementation at the level of staff and teams, it is also necessary to explore further how the forms of work identified by NPT operate among those funding and overseeing services at a strategic level.
R2C15	The references are a mess. Please structure, use new references and use the same annotated structure. (specifically nr. 7-9, 13-16) Please always use dates when website accessed.	Thank you – cited references have been corrected, access dates added to websites, and all references appear in BMJ Open format.

R3C1	TITLE - Thank you for clarifying the INSCCOPe title within the 'Aims and objectives' section, however this should also be in the Title of your manuscript for consistency and clarity that the study will be discussing implementation of INSCCOPe.	Thank you – the title has been changed to: Implementing professional behaviour change in teams under pressure – results from phase one of a prospective process evaluation (the Implementing Nutrition Screening in Community Care for Older People (INSCCOPe) project).
R3C2	INTRODUCTION - The addition of the references and organization of this section has improved enormously but remains lacking with respect to the justification on the reasons why it is necessary to introduce and implement a new process, justifying why you chose to implement a new procedure. While the details around existing organisational policy discussed in page 4 paragraph beginning line 9 thoroughly explains the procedure updates, additional detailed evidence surrounding what prompted this, what is currently happening or not happening in practice and an elaboration on the previous service development work discussed in page 4/line 1 (reference 23) may be interesting to justify this aim.	Thankyou – we have added the following at point suggested in the comment: Leading on from this service development project, we were alerted to the current situation across a local NHS Community Trust where nutritional care was only intermittently implemented (particularly the use and follow up of good care plans) due to other priorities of care and a lack of awareness of the issue. This highlighted the need to change practice in delivery of nutritional care for older people across the community.
R3C3	RESULTS AND DISCUSSION - There are important results that come out when going through this section relating to the differences or lack of differences between training participants and non-training participants that should be highlighted and discussed further. Furthermore, results indicate nonsignificant changes between NoMad T0-T1 responses within tables 3-5, within both training	Thank you – this raises an important point about changes and lack of differences in areas of implementation not reaching statistical significance, which we discussed within the study team but felt were beyond the scope of the current paper to address. The aim of this article is to present results from phase one of implementation, and to undertake a process evaluation of the new procedure, and to identify factors promoting or inhibiting its implementation. We have done this by focusing on the main findings of our mixed methods study and its implications for further development of the new procedure.

	participants and non-training participant groups which signify important results to present and discuss on the effect of training and not causing change. There is a point that should also be discussed further regarding the low attendance of training sessions (page 11 /line 56- 60% of staff did not complete the training).	We feel that the findings to which the reviewers point are relevant but would be better placed within an evaluative paper following completion of phase two, as they are beyond the scope of the current paper. As we have pointed out in our responses to reviewer two's concerns about the length of the paper, our challenge has been to balance detail in reporting for a diverse audience while keeping within reasonable limits in terms of length. We therefore agree that these are interesting findings but feel that they are beyond the scope of our paper to address at this stage. In response, we have added the following to the end of the 'limitations' section of the paper: Finally, there are indications of differences between training and non-training participants in relation to implementation indicators, as well as differences between T0-T1, that did not reach statistical significance but may warrant further exploration. The aim of this article was to present results from phase one of implementation, to identify factors promoting or inhibiting its implementation and indicate how these have informed recommendations for further development. Further discussion is therefore beyond the scope of the current paper; however, we intend to explore these issues further in a future article reporting results from phase two of implementation, wherein we can explore them in relation to the effect of changes recommended here.
R3C4	Take care not to over emphasise statistical significance. Phrases referring to "approaching significance" should be removed as they could be mis-leading.	Thank you – we have amended the relevant section as follows: [RESULTS] Here, results indicate a potential difference in how well participants in respective sub-groups understood the new procedure in terms of their own practice (Individual Specification), though the difference between the observations did not reach statistical significance (p=0.06, see Additional File 4, table 1). [DISCUSSION] This shift was significant for non-training participants (p=0.02), and was observed but did not reach statistical significance for training participants (p=0.07), indicating that implementation may have had some effect on staff perceptions of the effect of nutrition screening and treatment on working relationships. In addition, we have removed the following text:

		[RESULTS] Changes in Q13 responses for non-training participants (2.1 (T0) – 2.4 (T1)) also approached significance (T = 8.00, r = -0.29, p = 0.07, see Additional File 4, table 2). [RESULTS]…while Q6-T1 approached statistical significance (W = 156.5, r = -0.33, p = 0.06 – see Additional File 1, table 1)
R3C5	While your responses highlight the limitations of the implementation of the new procedure, limitation of the study design should also be discussed.	The following sub-section has been added to the end of the 'Discussion' section: Limitations of the study The study protocol stated that a quota sample would be used, derived from 'data on composition of target population by role (e.g. community nurse, physiotherapist) and NHS Agenda for Change (AfC) band (the current grading system for staff seniority within in the target population) [which would be] provided by the trust' [43]. Unfortunately, these data were not made available to the INSCCOPe team, and as such we proceeded with a strategy of maximum recruitment within each team. This limited our reporting of the relationship between the sample and target populations with respect to these characteristics. While 72 participants were originally recruited at T0, 32 went on to complete NoMad at T1. While 12 participants were identified as having left their teams (16% of the T0 sample), reasons for non-completion were unavailable for a further 29 participants. This reduction indicates vulnerability of prospective studies in complex healthcare environments to participant attrition, a factor in which may have been that questionnaires at T1 were cascaded to participants at team meetings via team leads, whereas at T0 they were completed at the point of recruitment in the presence of a researcher. For data collection at T2, the INSCCOPe team will attend team meetings in person to administer instruments, to avoid potential risks of further attrition (e.g. questionnaires getting lost due to changeable working conditions of team leads). Both survey and interview contained questions relying on participant recollection of events over varying periods of time, and as such recall and response bias may be present.
R3C6	RESULTS AND DISCUSSION: The recommendation highlighting the delivery of training through the e-portal is generic, support from the results is needed for why this point is	Re: recommendation for e-training – one response to poor training attendance would be to make training mandatory: however, that is not currently possible for those developing and implementing the procedure. We have added the following sentences (bold) to the recommendation for e-training

	recommended. It seems that the real result of this implementation is that despite positive attitudes to nutritional management of patients from staff, the service that you implemented didn't actually produce the result that might have liked. The obvious follow-on from this seems to us to not be to appoint a new member of staff or to implement e-training but to explore the reasons why training failed. It seems more likely that it is a failure to understand the importance of the management of malnutrition and to prioritise it in patient management that is likely to be an issue.	Secondly, training design needs to be adaptable to cope with the changeable working patterns, organisational and resource support challenges, and staff turnover that restricted training participation and left those who did complete the training vulnerable to attrition. One option might be to make training mandatory for all staff; however, the procedure development and delivery team indicated that this would not be possible at the current time. We therefore recommend that training is delivered through the existing organisational e-learning portal, rather than in person. This change is intended to deliver several improvements. Firstly, widening of scope for participation in changeable working conditions, thereby increasing resistance of implementation to organisation turbulence. Secondly, connecting training in the new procedure with existing nutritional e-learning resources on screening of malnutrition (see Additional File 1, Section 6.1) thereby increasing coherence (specifically differentiation, individual and communal specification) of the new procedure in terms of its relation to existing nutritional working practices. Thirdly, in locating both new and existing training components within the e-learning platform offers the potential to reduce costs associated both with training provision, and with resources needed for monitoring and support of procedure training and compliance to be undertaken by the key person. In light of this, the link between the changeability of the working environment shown in the results, and the use of e-training as a response given the constraints on mandatory training and existence of a portal at site, is clearly demonstrated. Re: focusing on training instead of key person – non-attendance of training is an important aspect of intervention development, and therefore it was one of two important aspects of the intervention. However, it is perhaps not appropriate to state that training failed as such, given the indications of positive impact from pre-post training knowledge check scores. It appears that attendance, rather than training per se is the issue, and this informs recommendations for both the key person (i.e. to address information needs, and monitor training/compliance) and the e-training (as described above). The importance of a key person in supporting implementation of new nutritional screening and treatment activities is further supported by previous examples from other settings which have been referenced in the text

		[11, 35]. We have added the following to make this link more explicit: The value of such a role in implementing new nutritional care procedures has also been demonstrated in secondary care settings in helping staff understand new nutritional procedures (coherence) and work through changes to their existing practices and relationships (cognitive participation) [11,35] These interventions recommendations have been implemented, and evaluation is currently ongoing and will be reported in a future INSCCOPe Phase Two results paper.

VERSION 3 - REVIEW

REVIEWER	Dr. Christine Baldwin, Dr. Elizabeth Weekes, Massar Dabbous Dr. Christine Baldwin, King's College London, Lecturer Nutrition and Dietetics Dr. Elizabeth Weekes, Guy's and St. Thomas' NHS Foundation Trust, Consultant Dietitian Massar Dabbous, King's College London, PhD candidate
REVIEW RETURNED	22-May-2019

GENERAL COMMENTS	Accept