

STARSurg Collaborative Authorship Policy

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Contributions

This document is based on the example provided by the West Midlands Research Collaborative (WMRC) authorship policy, and we would like to thank them for sharing.

The first version of this document was drafted by Sam Brown, Omar Kouli, Kenneth McLean. We have been grateful for external input from James Glasbey and Dmitri Nepogodiev. This has subsequently been approved by the STARSurg committee, and will be reviewed on an as required basis.

About STARSurg

General Overview

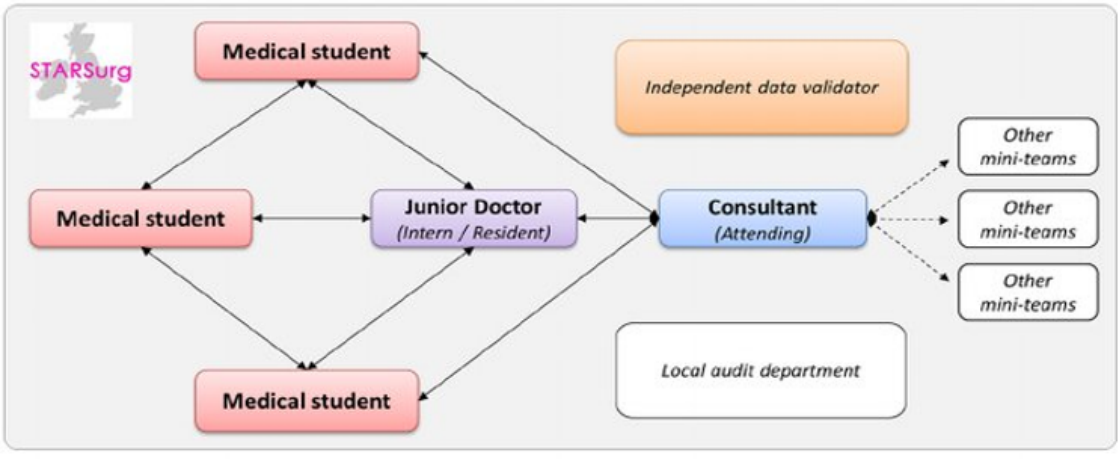
Student Audit and Research in Surgery (STARSurg) collaborative is the first national, student-led audit and research network with representation from all clinical medical schools in the UK and Republic of Ireland (ROI).

We aim to foster academic and research training, promote evidence-based practice, and build a culture of collaboration needed to improve patient care. We empower students to get involved in high quality academic projects, forming links with supervising junior doctors and consultants. Through this, students contribute data to national studies while gaining an understanding of clinical academia, audit and research methodology, and ethical considerations.

STARSurg Collaborative Authorship Model

STARSurg utilises a well-established collaborative research methodology to produce high-quality audit and research in a multicentre setting [1]. So long as predefined authorship criteria are met, everyone involved gains PubMed-citable "Collaborator" status on the resultant publications.

We use a mini-team approach (consisting of medical students and junior doctors) at each participating centre who share responsibility for local data collection using a predefined protocol designed by STARSurg steering committee and an external advisory group. Medical student regional leads at every medical school ensure the coordination of mini-teams at surrounding hospitals and act as a link between collaborators and steering committee. Data collection at each hospital is supervised by a local consultant to allow adequate support to regional leads and local collaborators at the site.



Medical student
- Registers audit / research locally
- Identify patients for inclusion in study
- Data collection

Junior Doctor
(Intern/Resident)
- Supervises students
- Assists in registering audit/research
- Helps identify patients

Consultant *(Attending)*
- Clinical governance
- Overall responsibility for patient care
- Supervises junior doctor and students

Independent validator
- Validates data collected
- Work at selected data collection sites
- Reports to steering committee

Collaborative Authorship Policy

Overview of Collaborative Authorship

Authorship of publications ensures appropriate credit and responsibility for any published work to the contributors who have made substantial intellectual contributions to a particular study or paper.

The International Committee of Medical Journal editors (ICMJE) recommends that authorship be based on the following 4 criteria [2]:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

For large-scale, prospective data collection to be possible this requires hundreds or thousands of people to contribute. Each of these has a meaningful and essential contribution to the project, which must be reflected in the authorship structure of the publications from collaborative groups. This document sets out an authorship for single corporate authorship policy for collaborative research, which is as compliant as is practicable with ICJME recommendation for projects of this scale. This collaborative authorship model has been successfully used in several of the world's leading general medical and specialist journals [3-5].

Rationale for Single Corporate Authorship

Collaborative work and publications have evolved over the past 10 years. Particularly in the early stages of trainee-led research collaboratives, publications used a mixed authorship model.

- A mixed authorship model is where the writing and/or steering group is credited as PubMed-citable authors, with all others involved in the study as PubMed-citable collaborators (e.g. a by-line on PubMed showing: "*Smith J, Tinker T, Bell D on behalf of MADEUP Collaborative*").

Following the example of West Midlands Research Collaborative (WMRC) and National Research Collaborative guidelines [2], we use a single corporate authorship model ("*STARSurg Collaborative*") [6].

- A single corporate authorship model is where a single group name ("STARSurg Collaborative") is used at the top of the article. No individual authors are included in this top byline.
- Everyone (even the writing and steering group members) is listed either at the end of the article or more frequently in an online appendix / supplementary material. Here each collaborator is listed alongside the role they had in the study (e.g. separate lists of those involved in study design, data collection, writing, etc). All authors are included in the article's PubMed record.

Overview of Definitions of Authorship Models:

Let's take an example of the same study of 10 centres (50 data collectors) which was designed and led by 3 people (Anna, Barry, and Catherine). Here are three different ways of authorship being attributed.

Authorship Model	PubMed-citable Authors	PubMed-citable Collaborators
Traditional	Writing group / Steering group only (Anna, Barry, and Catherine)	None (no data collectors recognised)
Mixed Corporate	Writing group / Steering group only (Anna, Barry, and Catherine)	All Other Individuals Involved (all 50 data collectors)
Single Corporate	Collaborative name only ("MADEUP Collaborative")	All Individuals Involved (all 53 people involved)

STARSurg remains firmly committed to our founding principal of single corporate authorship (SCA) for all papers in which our collaborative network is engaged and meets the authorship criteria (e.g. where local collaborators collect and submit patient data). We believe in the single corporate authorship model for several important reasons:

- **Equitable recognition of contributions**: A single corporate authorship inherently recognises that collaborative research studies would not be possible without teamwork and contributions from all collaborators. This avoids the perception of the writing group (in particular the person listed as first author) taking the majority of the credit, instead sharing the credit fairly amongst all collaborators. This also serves to challenge traditional hierarchy within academic medicine.

- **Enhances individual recognition**: Rather than diminishing recognition, corporate authorship increases the granularity of credit received by individuals, since their precise contributions are clearly documented (e.g. within an appendix). A single corporate authorship also allows better delineation of the precise contribution each member of the steering and writing groups within that same appendix.

- **Shared ownership of outputs**: Collaborators should feel engaged and involved as part of a large-scale effort to improve patient care. We believe single corporate authorship better empowers collaborators to disseminate and present the results and to share them (e.g. word of mouth, social media, etc).

While STARSurg Collaborative do not endorse the approach (for the reasons outlined above), we recognise mixed authorship policies still allow for appropriate recognition of contributors as PubMed-citable collaborators [7-10]. The rationale behind this is understandable for several reasons, most importantly:

1. It clearly demonstrates who is directly accountable for the accuracy or integrity of the manuscript.
2. There are specific instances where this may not be the most appropriate option (often occurring when working with external individuals or groups which do not belong to formal collaboratives, or with formats that require named byline authors such as research letters).

Applications of this Policy

1. **All publications that use data collected by the STARSurg network will be published under a single corporate authorship.**

- Numerous journals now have examples of publications using single corporate authorships. In the event that a journal does not accept publications under a single corporate authorship, then STARSurg Collaborative will withdraw and publish in an alternative journal.

- The authorship model should be checked with a new journal at the point of submission. If a journal refuses to publish using a single corporate authorship policy, the paper submission should not be submitted (or withdrawn) and sent to an alternative journal.

- Journals unfamiliar with collaborative publications may make errors in how the by-line is to be displayed on the manuscript proof and/or PubMed (e.g. commonly listing the corresponding author as the first author). STARSurg will contact the journal to have this corrected as soon as possible.

2. **For those publications that do not use data collected by the STARSurg network, the preference should generally be to submit under a single corporate authorship.**

- Protocol manuscripts should be submitted using single corporate authorship.

- Research letters or other publications may be submitted under a single corporate authorship ("*STARSurg Collaborative*") or mixed authorship ("*Authors XYZ on behalf of STARSurg Collaborative*") as appropriate, with the final decision resting with the STARSurg Steering Committee.
  - Please note a typical research letter (200-400 words) referring to published or summary data on a STARSurg project would not typically allow inclusion of those not directly involved in writing (e.g. would not include the project steering committee, regional leads, or those involved in data collection).

3. **When working with external groups and research collaboratives, STARSurg must ensure that all eligible collaborators are PubMed-citable and must advocate for single corporate authorship wherever possible.**

- An outline of the proposed by-lines when working with external groups can be found in **Appendix 2**.
  - For example, when working with an external collaborative who is also contributing data, a joint corporate authorship by-line ("*STARSurg Collaborative and EuroSurg Collaborative*") should be used.

- We recognise not all individuals or research collaboratives utilise a single corporate authorship, and in some specific cases this would not be appropriate.

- For example, when collaborating with individuals who are not a collaborative and it would not be reasonable to consider them part of the "STARSurg Collaborative" or for them to create a group name purely for the purposes of the publication.
- In the event a single corporate authorship model is not typically used by the other parties, this will be sought to be condition of collaboration on the manuscript (where appropriate).
- If not appropriate, a mixed authorship by-line should be used (e.g. "*Authors XYZ and STARSurg Collaborative"*) with it being mandatory that all STARSurg collaborators are PubMed-citable.

4. **Members of the writing groups for STARSurg publications should be selected from those who have a clear understanding underlying work (e.g. a subset of the STARSurg steering committee) and/or provide specific expert knowledge relevant to the publication (e.g. members of the advisory group)**.

- The process of academic writing can be complex, and achieving high-quality publications can be a challenging and extended process (even for those who are experienced). However, STARSurg runs "*Hack Days*" to support collaborators to get involved and upskilled in the writing process.

5. **All presentations that include patient data from a STARSurg project will be presented under a single corporate authorship**.

- The presenter should refer to themselves as presenting on behalf of the STARSurg Collaborative (e.g. "*Bloggs J presenting on behalf of the STARSurg Collaborative*").
- Prize money awarded for presentations on behalf of the collaborative should be awarded directly to the collaborative to support running costs. Other non-monetary prizes can typically be kept by the presenter, after confirmation with the STARSurg Steering Committee (e.g. free conference registration).
- STARSurg will announce these prizes to the network, and will indicate which project this has arisen from. Relevant collaborators may indicate on their CV that a prize was awarded for a project that they were involved with, but must make it explicit that they were not the presenting author.

6. Presenters should be selected from those who have directly contributed to the underlying work.

- When presenting the combined results of data collection, this should be a member of the writing group of the manuscript or steering group of the project that is being presented. Priority should be given to eligible medical student team members.

- When presenting the results of local data collection (e.g. to the hospital audit department), this should either be performed by the named hospital lead or by a colleague who was involved in data collection that they have delegated to.
    - Queries over the choice of local presenter should be resolved by the local supervising consultant.
    - Presentation of local results is an essential part of the audit process, and so if no-one is able to present the results, the named hospital lead should provide a written summary of the local results to their hospital audit department.

7. **Local collaborators share ownership of the data they collect, and so can present or publish their own local data.**

- STARSurg Collaborative should be credited in any research output using local data collected as part of a STARSurg project (given STARSurg conceived and designed the study, and supported local data collection), and so should be provided the draft output to review at least 1 week prior to submission. **No submissions should be made without the written (email) consent of STARSurg Collaborative.**

- STARSurg will not share data between sites to meet our commitment to preserve confidentiality and data protection, but can be approached to request specific analyses. This including those at regional or national levels, and will be assessed based on STARSurg capacity to support analysis, scientific merits of the proposal, and distinction from previous or planned research outputs from the dataset.

Guidance for Collaborators

Process of Determining Authorship

1. **All eligible individuals will be listed as PubMed-citable collaborators within the STARSurg Collaborative in accordance with the role they fulfilled in the study (see Appendix 1 for examples).**

- Each study is unique and authorship rules will be made clear by the steering committee and will be detailed in the study protocol in advance of data collection. This includes roles and eligibility requirements.
  - If the prespecified authorship criteria is subject to change during a study, this will be reflected in an update to the study protocol (if in the unlikely event this is a move to restrict authorship, this will be communicated to all collaborators by the STARSurg committee, along with the rationale).

- Collaborators and mini-teams who do not meet the prespecified authorship criteria will be removed from the authorship (along with any data they have submitted being removed from the final dataset).
  - Collaborators have an opportunity to appeal this decision, but would be expected to demonstrate how they have fulfilled the authorship criteria for that role.

- These authorship criteria apply to all roles listed in the protocol (including individual members of steering committee, regional leads, supervising consultants, etc).

2. **It is a shared responsibility between collaborators and STARSurg Committee to ensure authorship details are present and correct (e.g. their collaborators and affiliation) within the timeline communicated to project collaborators.**

- STARSurg Collaborative and our regional leads handle the details of 1000s of collaborators per project. While we have developed processes to help ensure accurate authorship details, there are inevitable errors that arise (whether by collaborators, regional leads, or steering committee).

- STARSurg Collaborative will conduct at least two rounds of authorship checks following a project where the full authorship list will be shared for collaborators to review.
  - This will be disseminated at minimum through the STARSurg mailing list and the emails associated with the REDCap accounts of collaborators.
  - It is the responsibility of collaborators to ensure they maintain accurate and up-to-date email accounts associated with these.

- Collaborators have final responsibility to perform any actions requested to amend this (e.g. updating their ORCID ID) and to check this has been performed correctly prior to the deadline for authorship checks. **STARSurg collaborative will decline any additional change requests highlighted after the deadline.**

3. **No individual requests to amend the authorship will be accepted after online publication of a manuscript.**

- Any requests made after this will be noted and integrated into any future publications using the dataset.

How to Cite Research Outputs

1. **All those who are Pubmed-citable collaborators share ownership of resultant research outputs.**

- It is the responsibility of collaborators to ensure it is appropriate for them to cite a particular publication or presentation. For example, study protocols should not be cited by those only involved in data collection.

- This can be determined from the names listed in the manuscript appendix or as Pubmed-citable "Collaborators" (**Appendix 3**).

2. **Pubmed-citable collaborators can include the publications on their CV or use as evidence of academic engagement and competencies (as appropriate).**

- All collaborators should use the suggested citation format for publications (below) to prevent any potential misunderstanding of their role and individual contributions. In particular, we recommend to avoid citing as:
    - "*Bloggs J, STARSurg Collaborative*". This implies you are first author on the publication (intentionally or unintentionally, this could be considered to be dishonest).
    - "*STARSurg Collaborative (Bloggs J)*". This is ambiguous about your role, and we recommend transparency to allow understanding of your role without having to refer back to the publication.

- We consider that being a "*collaborator*" is equivalent to being a "*co-author*". However, if using a collaborative publication in applications please pay close attention to the language used and ask the organising body to clarify if the language isn't clear to avoid any disappointment later. A majority of training boards continue to accept and award collaborative publications in consideration of applications, awards and training progression milestones [11].

Suggested CV citation format for publications:
STARSurg Collaborative (Bloggs J, [insert role(s) as appropriate]*).*

For example:

- *STARSurg Collaborative (Bloggs J,* [hospital lead & data collection]*).* Prognostic model to predict postoperative acute kidney injury in patients undergoing major gastrointestinal surgery based on a national prospective observational cohort study*. BJS Open, 2018; 2 (6): 400-410.*

3. Pubmed-citable collaborators can include the presentations on their CV.

- Please note due to there being both a presenter as well as the collaborators on work being presented, it can be difficult to succinctly convey the exact roles an individual had had when citing a presentation.

- All collaborators should use the suggested citation format for presentations (below) to prevent any potential misunderstanding of their role and individual contributions. In particular, we recommend to avoid citing as:
    - "*Bloggs J, STARSurg Collaborative*". This is ambiguous and could imply you are first author on the research (intentionally or unintentionally, this could be considered academic fraud) and/or presented the work yourself (where it may be someone else).
    - "*STARSurg Collaborative*". This is ambiguous and does not make clear whether you or another has presented the work (intentionally or unintentionally, this could be considered academic fraud).

- Please note that many applications will only credit presentations that you have delivered yourself. Please pay close attention to the language used and ask the organising body to clarify if the language isn't clear.

Suggested CV citation format for presentations:
STARSurg Collaborative (Bloggs J, [insert role as appropriate]*).*

For example, if you are listing a STARSurg presentation done by someone else:

- STARSurg Collaborative *(Bloggs J,* [data collection]*). REspiratory COmplications after abdomiNal surgery: an international multi-centre audit of adherence to perioperative measures to reduce postoperative pulmonary complications (PPCs) following major abdominal surgery (Oral).* ASiT (Association of Surgeons in Training) ASiT International Surgical Conference 2020, 6th to 8th March 2020, Birmingham (UK).

Alternatively, if you are listing a presentation done by yourself:

- *Bloggs J** (data collection) on behalf of STARSurg Collaborative. *REspiratory COmplications after abdomiNal surgery: an international multi-centre audit of adherence to perioperative measures to reduce postoperative pulmonary complications (PPCs) following major abdominal surgery* (Oral). Royal Infirmary of Edinburgh surgical audit meeting, 6th March 2020, Edinburgh (UK).

**denotes presenting author*

References

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Appendices

Appendix 1: Examples of Typical Authorship Roles within STARSurg Collaborative

In accordance with National Research Collaborative (NRC) authorship guidelines [2], all collaborators on research outputs will be listed under a single corporate authorship ("STARSurg Collaborative").

Under that single corporate authorship, all eligible individuals will be listed as PubMed-citable collaborators within the STARSurg Collaborative in accordance with the roles defined in the protocol (so long as the minimum requirements for authorship are met).

The roles, the maximum number of collaborators allowed, and the exact criteria for authorship may vary from project-to-project. However, these have previously included:

1. **Publication-specific roles** (present based on involvement in developing the manuscript):

a) **Writing Group:** A group of medical students, junior doctors and external experts responsible for the overall scientific content, data analysis, and preparation of research manuscripts, including an overall guarantor.

b) **Statistical Analysis**: A small team with statistical expertise who take overall responsibility for the statistical analysis plan and quality assurance of data analysis, including an overall statistical guarantor.

2. Project-specific roles (present based on involvement in the project which a manuscript is derived from):

a) **Steering Committee**: A core group of medical students and junior doctors who have overall responsibility for protocol design, project co-ordination, and data handling, including a student lead, and senior lead.

b) **External Advisory Group**: A panel of cross-disciplinary field experts and/or patient representatives who are able to ensure contextual and scientific relevance of the protocol design, data fields and data interpretation.

c) **Regional Leads**: A network of medical students across all medical schools. They are responsible for co-ordinating mini-teams at local hospitals, and act as a link between mini-teams / hospital leads, and the steering committee.

d) **Local Leads (Hospital Leads)**: A single lead point of contact for data collection at each site who has overall responsibility for site governance registration and coordinating handover between local collaborator teams.

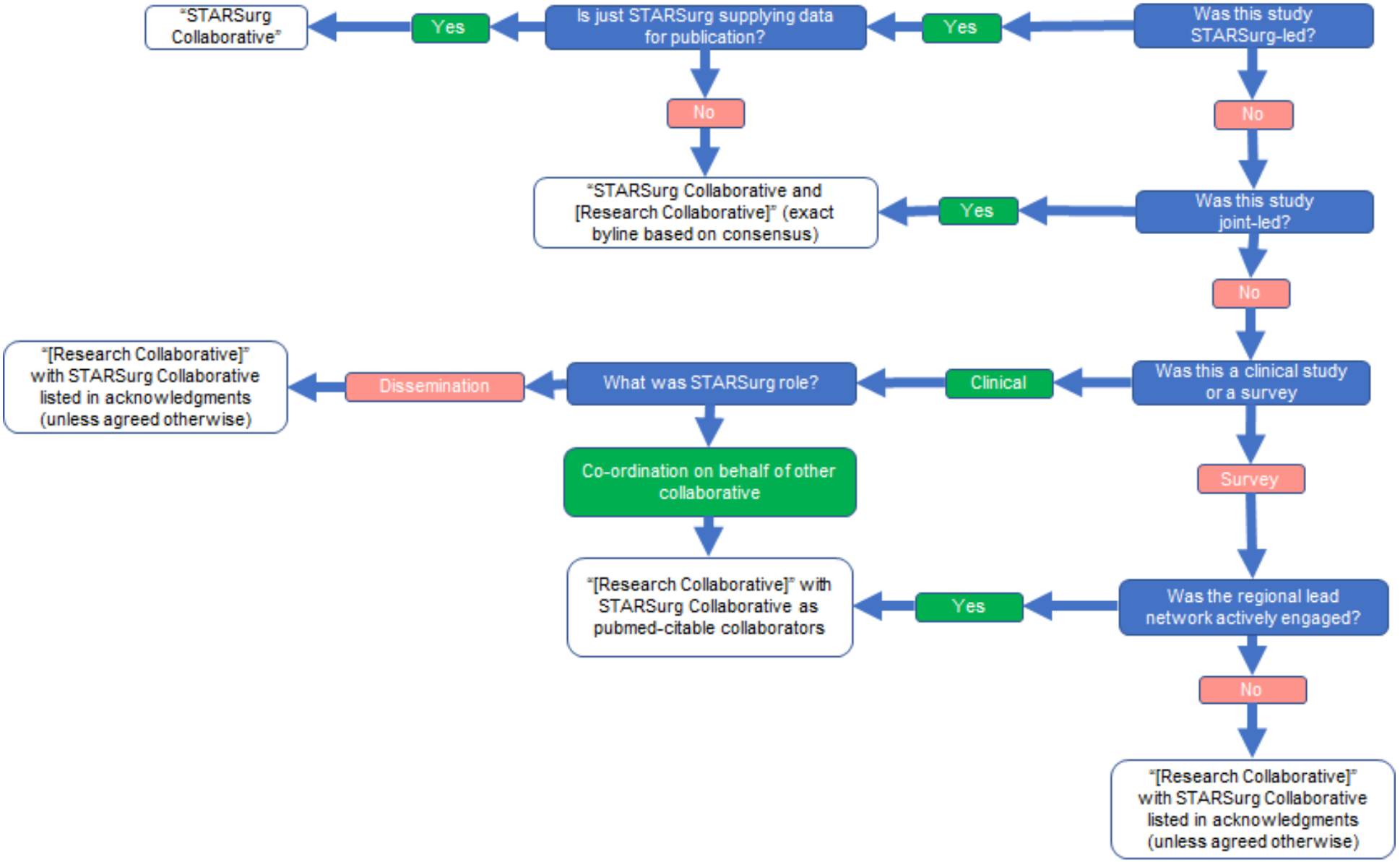
e) **Local collaborators (Data Collectors)**: A team responsible for data collection over a specific period at a particular centre.

f) **Local supervising Consultant**: Data collection in each hospital must be supervised by one or more consultants. The number of supervisors is study-specific and predetermined by the steering committee.

g) **Local data validators:** Medical students or junior doctors, not involved in original data collection, who reviews a selection of patients or data points from their centre to ensure protocol compliance.

h) Translators: Medical students or junior doctors that have been involved in cross-language translation of study materials, where needed.

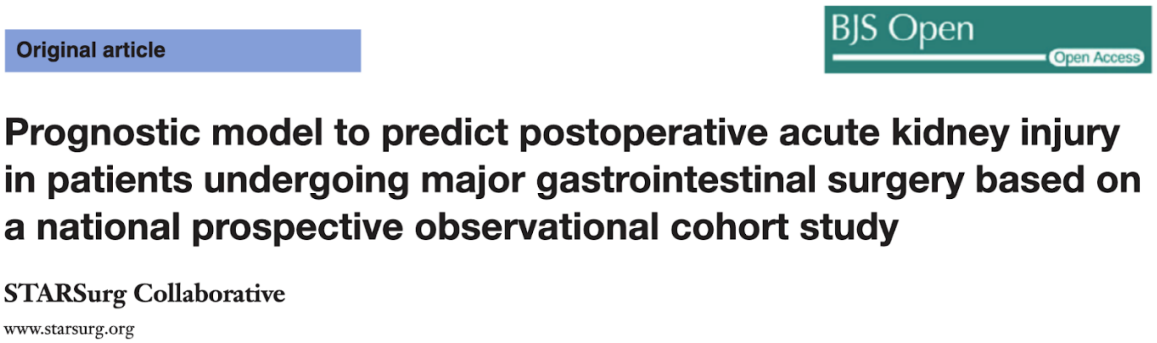
Appendix 2: General STARSurg publication by-line policy



Appendix 3: Appearance of collaborative authorship by-lines

Example from the "*Prognostic model to predict postoperative acute kidney injury in patients undergoing major gastrointestinal surgery based on a national prospective observational cohort study*" [6]

1. Single corporate authorship on journal manuscript:



Original article

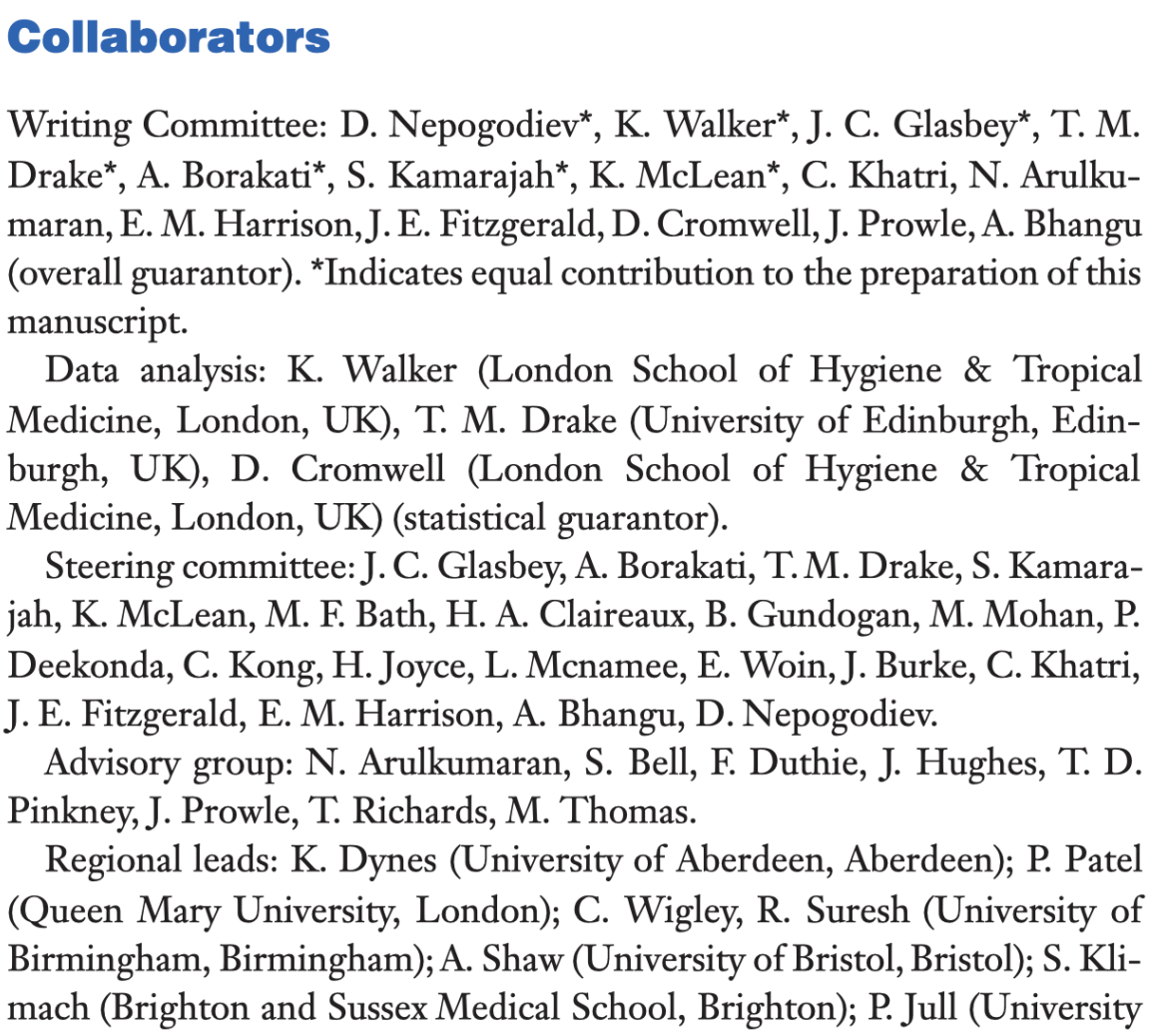
BJS Open Open Access

Prognostic model to predict postoperative acute kidney injury in patients undergoing major gastrointestinal surgery based on a national prospective observational cohort study

STARSurg Collaborative

www.starsurg.org

2. Collaborators listed in online appendix of journal manuscript (limited extract):



Collaborators

Writing Committee: D. Nepogodiev*, K. Walker*, J. C. Glasbey*, T. M. Drake*, A. Borakati*, S. Kamarajah*, K. McLean*, C. Khatri, N. Arulkumaran, E. M. Harrison, J. E. Fitzgerald, D. Cromwell, J. Prowle, A. Bhangu (overall guarantor). *Indicates equal contribution to the preparation of this manuscript.

Data analysis: K. Walker (London School of Hygiene & Tropical Medicine, London, UK), T. M. Drake (University of Edinburgh, Edinburgh, UK), D. Cromwell (London School of Hygiene & Tropical Medicine, London, UK) (statistical guarantor).

Steering committee: J. C. Glasbey, A. Borakati, T. M. Drake, S. Kamarajah, K. McLean, M. F. Bath, H. A. Claireaux, B. Gundogan, M. Mohan, P. Deekonda, C. Kong, H. Joyce, L. Mcnamee, E. Woin, J. Burke, C. Khatri, J. E. Fitzgerald, E. M. Harrison, A. Bhangu, D. Nepogodiev.

Advisory group: N. Arulkumaran, S. Bell, F. Duthie, J. Hughes, T. D. Pinkney, J. Prowle, T. Richards, M. Thomas.

Regional leads: K. Dynes (University of Aberdeen, Aberdeen); P. Patel (Queen Mary University, London); C. Wigley, R. Suresh (University of Birmingham, Birmingham); A. Shaw (University of Bristol, Bristol); S. Klimach (Brighton and Sussex Medical School, Brighton); P. Jull (University

3. Single corporate authorship on PubMed:

> BJS Open. 2018 Jul 27;2(6):400-410. doi: 10.1002/bjs5.86. eCollection 2018 Dec.

Prognostic model to predict postoperative acute kidney injury in patients undergoing major gastrointestinal surgery based on a national prospective observational cohort study

STARSurg Collaborative

Collaborators + expand

PMID: 30513129 PMCID: PMC6254006 DOI: 10.1002/bjs5.86

4. Collaborators listed on PubMed when "expand" selected (limited extract):

> BJS Open. 2018 Jul 27;2(6):400-410. doi: 10.1002/bjs5.86. eCollection 2018 Dec.

Prognostic model to predict postoperative acute kidney injury in patients undergoing major gastrointestinal surgery based on a national prospective observational cohort study

STARSurg Collaborative

Collaborators − collapse

Collaborators

STARSurg Collaborative: D Nepogodiev, K Walker, J C Glasbey, T M Drake, A Borakati, S Kamarajah, K McLean, C Khatri, N Arulkumaran, E M Harrison, J E Fitzgerald, D Cromwell, J Prowle, A Bhangu, K Walker, T M Drake, D Cromwell, J C Glasbey, A Borakati, T M Drake, S Kamarajah, K McLean, M F Bath, H A Claireaux, B Gundogan, M Mohan, P Deekonda, C Kong, H Joyce, L Mcnamee, E Woin, J Burke, C Khatri, J E Fitzgerald, E M Harrison, A Bhangu, D Nepogodiev, N Arulkumaran, S Bell, F Duthie, J Hughes, T D Pinkney, J Prowle, T Richards, M Thomas, K Dynes, P Patel, C Wigley, R Suresh, A Shaw, S Klimach, P Jull, D Evans, R Preece, I Ibrahim, V Manikavasagar, F S Brown, P Deekonda, R Teo, D P Y Sim, A Borakati, A E Logan, I Barai, H Amin, S Suresh, R Sethi, W Bolton, O Corbridge, L Horne, M Attalla, R Morley, T Hoskins, R McAllister, S Lee, Y Dennis, G Nixon, E Heywood, H Wilson, L Ng, S Samaraweera, A Mill, C Doherty, E Woin, J Belchos, V Phan, T Chouari, T Gardner, N Goergen, J D B Hayes, C S MacLeod, R McCormack, A McKinley, S McKinstry, W Milligan, L Ooi, N M Rafiq, T Sammut, E Sinclair, M Smith, C Baker, A P R Boulton, J Collins, H C Copley, N Fearnhead, H Fox, T Mah, J McKenna, V Naruka, N Nigam, B Nourallah, S Perera, A Qureshi, S Saggar, L Sun, X Wang, D D Yang, P Caroll, C Doyle, S Elangovan, A Falamarzi, K Gascon Perai, E Greenan, D Jain, M Lang-