SNAP3
Sprint National Anaesthesia Project

Commissioning brief for the **3rd Sprint National Anaesthesia Project: SNAP3**

RCoA
Royal College of Anaesthetists

NIAA
National Institute of Academic Anaesthesia

HSRC
Health Services Research Centre

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Author: SR Moonesinghe

1. Background

The Sprint National Anaesthesia Project (SNAP) programme was established within the Health Services Research Centre at the RCoA in 2013. SNAPs are research projects, which are characterised by:

- short-term period of data collection (usually a week or less)
- widespread NHS engagement (aiming for >90% of eligible hospitals participating across the 4 nations)
- opportunity for trainee engagement at local level
- supporting trainee development in research and leadership skills through a national leadership role.

The SNAP teams usually comprise:

- a chief investigator (CI) who is responsible for clinical and academic leadership
- a trainee lead investigator who is responsible to the CI and takes on leading the delivery of the study under the CI's supervision. This usually leads to a 2 to 3-year programme of work towards a doctoral (MD(res) or PhD) thesis
- project management and administrative support provided by the team at the Health Services Research Centre, led by Mr James Goodwin, Head of Research.
- the Quality Audit and Research Coordinator (QuARC) Network of the HSRC – QuARCs are usually clinical anaesthetists who represent their department on HSRC activities. They either act as the local principal investigator for the SNAPs or are responsible for finding someone in their department to fulfil that role.

SNAP1 reported patient reported outcomes after anaesthesia, recruiting over 15,000 consenting patients in 2 days from 97% of NHS hospitals. (1)(2)

SNAP2 reported on the epidemiology of critical are provision after surgery and recruited over 22,000 patients and 10,000 staff in one week from 92% of NHS hospitals; additionally, patients were also recruited in Australia and New Zealand. (3)(4)(5)

The HSRC is now seeking applications for the Chief Investigator role for SNAP3. The CI will be responsible for the design, delivery, analysis, and reporting of SNAP3. They will lead the recruitment of the trainee lead investigator (with support from the HSRC) and be responsible for their academic supervision

Following an open call to propose topics for SNAP3, a shortlisting process and face-to-face presentations by topic proposers, the clinical topics of perioperative frailty and postoperative delirium were selected as the broad themes that SNAP3 should seek to investigate.

2. Commissioning brief

i. Definitions and background

Frailty

> "A medical syndrome with multiple causes and contributors that is characterized by diminished strength, endurance, and reduced physiologic function that increases an individual's vulnerability for developing increased dependency and/or death." (6)

Frailty is of interest to the perioperative community, in particular given the context of an ageing population with increasing multi-morbidity. However, despite frailty being a highly topical clinical subject, there remain a number of unanswered questions regarding how it should be assessed or measured, for what purpose these assessments should be used, and potentially the opportunities to modify/optimise it.

Delirium

> "Delirium is a clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course." (NICE 2010)

Delirium can occur in various settings within secondary care, including medical, critical and postoperative care. It is thought to occur in at least 20% of medical patients and 10% of surgical patients (conservative estimates).

Frailty and delirium are linked in a number of ways. Some definitions of frailty specify that this is a condition of older age, although this can be contested. Increasing age is the biggest risk factor for delirium in hospitals. Both conditions are associated with patient harm and distress and resource utilisation – including increased risk of postoperative complications and longer length of hospital stay. At national level, both conditions are of increasing focus – for example, in England, GPs are now contractually required to identify and risk assess patients living with frailty using the automated electronic frailty index (eFI); and more and more hospitals are trying to implement the 4AT screening test for delirium.

Frailty and delirium were both shortlisted for consideration as separate topics for SNAP3. The panel assessing the proposals considered there to be potential risks with each topic considered separately, which might be overcome by a proposal that was developed to research both topics together. The potential risks included:

- frailty, while very topical, is of uncertain significance when compared to other risk factors and methods for measuring risk in perioperative patients (e.g. comorbidity assessment, functional capacity assessment, risk scoring etc)
- delirium, while clinically important, may not be considered to be a topic of relevance to many anaesthetists given that it usually occurs hours or days after surgery, and therefore after most anaesthetists will have relinquished responsibility for clinical care to other colleagues.

ii. Commissioning details

The HSRC invites detailed proposals on the aims, objectives, research, and delivery methods for SNAP3 from individuals who wish to be the Chief Investigator. Candidates are encouraged to consider the following issues and areas of inquiry when developing their proposals:

1. What is the purpose of evaluating frailty in the perioperative setting? e.g. screening, risk assessment, shared decision making, pre-operative optimisation, perioperative pathway modification, postoperative follow-up?
2. At what stage(s) in the perioperative setting should frailty be evaluated? Is frailty assessment of the emergency surgical patient valid, reliable and/or feasible?
3. What tools should be used to evaluate frailty, how do they compare against each other and what are the practical challenges of implementing these different tools?
4. How do frailty assessments compare in usefulness and accuracy to other risk assessment methods such as risk scoring (Nottingham hip fracture score, NELA tool, SORT, P-POSSUM, EuroSCORE etc), functional capacity assessment (e.g. Duke Activity

Status Index, Cardiopulmonary exercise testing, 6 minute walk test) or biomarkers (nt-pro-BNP etc)?
5. How will we overcome clinical reluctance to use objective measures of risk (e.g. scores) rather than their own clinical judgement if recommending frailty assessment for perioperative patients?
6. What are the practical challenges of diagnosing / measuring delirium in the perioperative population and how might these be overcome?
7. What are the modifiable and non-modifiable risk factors for delirium in the perioperative setting?
8. What is the relationship between frailty and delirium?
9. What are the short-term and longer-term consequences of perioperative delirium for patients and families, and healthcare professionals and systems?
10. What is the cost/cost effectiveness of measuring and/or treating frailty and/or delirium in the perioperative setting?

Please Note: *Proposals absolutely do not have to address all of these questions; these are suggestions for guidance only. Additional research questions are also absolutely valid and welcome as long as they are within the broad themes of perioperative frailty and delirium. The most important considerations of the shortlisting panel will be feasibility, coherence, clinical importance, and potential impact. It is also acceptable that proposals might focus predominantly on one area over another, but the risks of doing so (as articulated above) should be acknowledged and addressed in the application.*

iii. General considerations

SNAPs should:

- be eligible for adoption onto the NIHR portfolio – i.e. research projects which will go through the national research ethics and Health Research Authority (and equivalent in devolved nations) approvals processes and require patient consent or an opt-out process for non-consenting studies
- be deliverable at scale (i.e. in the majority of NHS hospitals without requirement for complex assessments or tests, significant un-costed local investment etc)
- engage trainees and trainee research networks
- have impact – on health policy, healthcare delivery, clinical practice
- be deliverable in a short time-frame of local data collection (usually a week or less)
- be of relevance and be able to engage perioperative clinicians (including allied health professionals)
- support the development and delivery of the RCoA's strategy including its perioperative medicine vision.

iv. Costs and staffing

The successful candidate will be awarded salary backfill to their employing organisation of 1 PA for 2 years. If the candidate is an allied health professional or a career scientist, the monetary equivalent of this will be awarded to the candidate's institution (directly allocated or directly incurred as determined on a case-by-case basis)

They will lead the appointment process for the trainee lead investigator (with the support of the HSRC team). The trainee lead investigator will be benefit from salary backfill of 0.75 WTE basic salary for 3 years in order to enable them to lead delivery of the project under the CI's supervision. (It is anticipated that the trainee will make up the rest of their salary through clinical work either in or out of their training programme/usual post)

Administrative support for SNAP3 will be provided in kind by RCoA/HSRC research team. This will include research team meeting costs and administration, videoconferencing facilities and access to the QuARC network.

The HSRC/RCoA will also support basic costs of database development, website development, printing of CRFs etc up to a total budget of approximately £10,000.

In addition, and only if desired by the Chief Investigator, mentorship can be provided by Professor Ramani Moonesinghe, HSRC Director and CI for SNAPs 1 and 2.

Please note, that while it may be possible to run SNAP3 within this funding and staffing envelope, depending on the proposal, additional funding may be required – for example:

- for costs of data linkage to the Office of National Statistics Mortality register or NHS Digital
- cost of statistical or other research support

If such costs are likely, proposals must include the strategy for applying for additional grant funding or securing these costs through other means.

3. Person Specification for Chief Investigator

Please reference this in the summary of relevant experience and expertise in your application – see below.

The CI should:

- have a permanent post in a UK NHS Trust or University as a clinician / clinical academic (essential)[i]
- have experience of successfully supporting or leading collaborative research (essential)
- have a track record of delivering ambitious projects (research or otherwise) (essential)
- have excellent communication skills (essential)
- be able to demonstrate excellence in trainee supervision, mentorship and team development (essential)
- be committed to the involvement of patients and public in the development, delivery and dissemination of SNAP3 (essential)
- have knowledge and experience of negotiating the ethical and regulatory framework for research in the UK (essential)
- have a track record of research and/or major QI or audit publication (essential)
- have the support of their employer (letter required) (essential)
- be able to manage a diverse and large team of collaborators (essential)
- have the relevant research skills to be able to deliver the analysis proposed or have a plan for how these skills should be commissioned (essential)
- have experience supervising doctoral research degrees or MSc dissertations (desirable)

[i] Applicants do not have to be medically qualified (i.e. applications are welcome from career scientists, nurses and allied health professionals) and they do not have to specialise in anaesthesia or related specialties.

4. How to submit your application

i. Deadline

Applications should be submitted in the form of word documents to hsrc@rcoa.ac.uk by **5pm on Friday 7 February 2020.**

Please provide an **application in the format specified below**, plus a **2-page CV and a letter of support from your clinical director or equivalent line manager**; this should include that they would be prepared to accommodate the time required to deliver this project within your job plan (acknowledging the 1PA contribution from RCoA)

ii. Format for Proposals

- Background and rationale (max 500 words)
- Aims, objectives and research questions
- Study design
- Additional costs and proposals for how these should be funded (see notes below)
- Opportunities for international collaboration (if any)
- Patient and public involvement
- Summary of relevant experience and expertise of the chief investigator (see Person Specification above)
- Gantt Chart (see notes below)

5. Additional Notes

i. Timelines

Please consider these when developing the Gantt Chart for your proposal.

Date	Activity
Monday 4 November 2019	Applications for CI open
Friday 7 February 2020	Applications for CI close
4 March 2020 (*TBC*)	Interview for CI post
March 2020	Applications for trainee lead investigator open
April 2020	Interviews for trainee lead investigator
Nov 2020 or Feb 2021	Trainee lead investigator starts in post

ii. Equality, Diversity and Environmental considerations

The HSRC strives for equality of opportunity for all current and potential future academics. We are committed to promoting diversity and inclusivity in academic leadership. Applications from non-University tenured candidates and those with a protected characteristic are particularly welcome.

We are committed to reducing our carbon footprint and enabling efficient working between collaborators throughout and outside the UK. To that end, we will support costs and administration of video and teleconferencing where it can reasonably replace face-to-face interactions.

iii. Enquiries

All enquiries to Ms Laura Cortés, HSRC Coordinator, via hsrc@rcoa.ac.uk.

iv. Further reading

- SNAPs pages on HSRC website
- HSRC Patient, Carer and Public Involvement and Engagement group
- James Lind Alliance Priority Setting Partnership for Perioperative Care
- Other relevant JLA PSPs
- NHS England guidance on frailty resources

6. References

1. Moonesinghe SR, Walker EM, Bell M. Design and methodology of SNAP-1: a Sprint National Anaesthesia Project to measure patient reported outcome after anaesthesia. Perioper Med (Lond). 2015;4:4.
2. Walker EM, Bell M, Cook TM, Grocott MP, Moonesinghe SR, SNAP-1 IG. Patient reported outcome of adult perioperative anaesthesia in the United Kingdom: a cross-sectional observational study. Br J Anaesth. 2016;117:758-766.
3. Moonesinghe SR, Wong DJN, Farmer L, Shawyer R, Myles PS, Harris SK, SNAP-2 Project team and Steering Group. SNAP-2 EPICCS: the second Sprint National Anaesthesia Project-EPIdemiology of Critical Care after Surgery: protocol for an international observational cohort study. BMJ Open. 2017;7:e017690.
4. Wong DJN, Harris SK, Moonesinghe SR, SNAP-2: EPICCS Collaborators,. Cancelled operations: a 7-day cohort study of planned adult inpatient surgery in 245 UK National Health Service hospitals. Br J Anaesth. 2018;121:730-738.
5. Wong DJN, Popham S, Wilson AM, Barneto LM, Lindsay HA, Farmer L, Saunders D, Wallace S, Campbell D, Myles PS, Harris SK, Moonesinghe SR, SNAP-2: EPICCS Study Collaborators. Postoperative critical care and high-acuity care provision in the United Kingdom, Australia, and New Zealand. Br J Anaesth. 2019;122:460-469.
6. Morley JE, Vellas B, van Kan GA, Anker SD, Bauer JM, Bernabei R, Cesari M, Chumlea WC, Doehner W, Evans J, Fried LP, Guralnik JM, Katz PR, Malmstrom TK, McCarter RJ, Gutierrez Robledo LM, Rockwood K, von Haehling S, Vandewoude MF, Walston J. Frailty consensus: a call to action. J Am Med Dir Assoc. 2013;14:392-397.