Centre for Perioperative Care

BGS

British Geriatrics Society
Improving healthcare for older people

Guideline for Perioperative Care for People Living with Frailty Undergoing Elective and Emergency Surgery

September 2021

Frailty Guideline Working Group

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Methodology

This guideline has been produced in accordance with Centre for Perioperative Care processes (Appendix 1–3).

Guideline review

This is version 1.0 of this guidance document, published in September 2021.

Any updates made to this guidance, based on feedback and/or significant changes in the academic literature, will be included in subsequent versions and reflected in the table below.

Version	Change	Date
1.0	First publication	22 September 2021

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Please note

Throughout this guideline practical resources are shown in red to distinguish from the references.

PREFACE

The Centre for Perioperative Care (CPOC) is a cross organisational body, aiming to facilitate and promote delivery of quality perioperative care; the practice of patient-centred, multidisciplinary and integrated care of patients from the moment of contemplation of surgery until recovery. Given this remit, CPOC is in a unique position to collate and evaluate evidence to develop and implement new guidelines to support delivery of perioperative care.

Frailty is a condition characterised by loss of biological reserve, failure of physiological mechanisms and vulnerability to a range of adverse outcomes including increased risk of morbidity, mortality and loss of independence in the perioperative period. With the increasing recognition of the prevalence of frailty in the surgical population and the impact on postoperative outcomes, The Centre for Perioperative Care (CPOC) and the British Geriatrics Society (BGS) have worked together to develop a whole pathway guideline on perioperative care for people living with frailty undergoing elective and emergency surgery.

Delivering whole pathway, quality perioperative care requires multicomponent intervention, with integration across community, primary, secondary and social care. A multidisciplinary 'one-team' approach across these sectors is necessary to deliver each component of the pathway:

- patient and carer involvement, education and empowerment
- preoperative risk assessment and optimisation of physiological status, comorbidities and geriatric syndromes including frailty
- lifestyle modification to improve both perioperative and long-term health outcomes
- shared decision making (SDM)
- optimal intraoperative surgical and anaesthetic management
- quality postoperative care in the most appropriate setting to include rehabilitation
- proactive discharge planning
- links and referral to relevant community, primary care and follow up services.

Perioperative care for people living with frailty is particularly complex and deficiencies in current perioperative pathways have been well described. Despite published interventions for frailty, an implementation gap between recommended care and routine perioperative practice exists. This may be a consequence of too few geriatricians, silo working and difficulties in embedding complex interventions for frailty in the clinical setting, compounded by unintended consequences of time-based targets (for example the 62 day cancer pathway) and a lack of commissioning incentives to embed a whole pathway perioperative team. To address this challenge, this new guideline has been coordinated by CPOC and the BGS, working with patient representatives and all stakeholders involved in the perioperative care of patients with frailty undergoing surgery.

As such, the scope of this guideline covers all aspects of perioperative care relevant to adults living with frailty undergoing elective and emergency surgery. It is written for healthcare professionals involved in delivering care throughout the pathway, as well as for patients and their carers, managers and commissioners. Implementation of the guideline will require collaboration across the four nations of the United Kingdom between all stakeholders, underpinned by an implementation strategy, workforce development with supporting education and training resources and evaluation through refinement of current national audit tools. We believe this guideline is an important step in improving outcomes for our patients and healthcare services.

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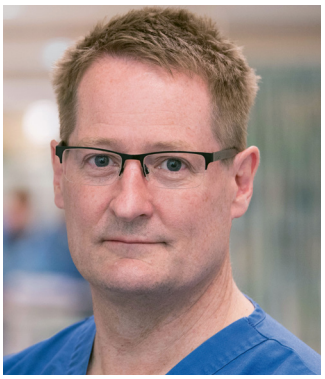

Dr David Selwyn
CPOC Director

September 2021

FOREWORD

There is a growing recognition that in the UK, we are living within an ageing community and that this comes with challenges to patient care, both old and new. Many of these challenges, patients having to cope with increasingly complex medical conditions, loneliness, and loss of independence, have been exacerbated by the recent COVID-19 pandemic and the subsequent surgical backlog.

Consequently, the perioperative journey that a patient needs to navigate, through primary, secondary and community care, has never been so important to both implement and embed; to provide the quality of life outcomes and health benefits that all patients should expect from a modern healthcare system. This is vital for older patients who are living with frailty.

The 'Guideline for Perioperative Care for People Living with Frailty Undergoing Elective and Emergency Surgery' brings together a wealth of evidence-based recommendations for the whole perioperative care pathway. It allows all healthcare professionals who support patients with frailty to recognise their role in that pathway and crucially to view their role in the bigger picture of patient care. Helpfully, right at the start of the document is a section including recommendations for patients living with frailty, as well as their carers.

Patients require good communication and integrated coordinated care to deliver optimal outcomes. This guidance provides a platform to support healthcare teams in achieving these aims and recognises the need for frailty assessment, alongside Shared Decision Making, to become the 'norm' in an older patients care and perioperative journey.

Mr Lawrence Mudford
CPOC Patient Representative

September 2021

BACKGROUND

Increasing numbers of older people are undergoing elective and emergency surgery.[1] This is unsurprising given the prevalence of degenerative, neoplastic and vascular disease in the older population. Whilst there may be symptomatic and longevity benefits from surgery in older people, adverse postoperative outcomes are more frequently observed in this group compared to younger people, particularly in the emergency setting.[2]

Frailty is now recognised as a significant risk factor for complications in both elective and emergency surgical patients.[3,4] A recognisable and measurable clinical syndrome, frailty is defined as a multidomain decline in physiological reserve and function resulting in an increased vulnerability to stressors.[5] Characterised by a cumulative decline in homeostatic mechanisms, frailty is associated with, although not universally observed, in ageing.[6] Unsurprisingly, frailty is also related to multimorbidity, with seven of ten patients with frailty also living with multimorbidity.[7] Furthermore, there is a complex interrelationship between frailty, sarcopenia, cachexia and disability.[8] Frailty and these related conditions result in increased rates of postoperative hospital acquired geriatric syndromes, complications, increased mortality rates, and adverse patient reported outcomes such as quality of life and loss of independence.[3,4,9,10] Despite the prevalence and complexity of these overlapping syndromes and issues, the current perioperative pathway is not tailored to the needs of the older person living with frailty.[11–13]

Patients living with frailty present to perioperative services as emergency or elective admissions (urgent or planned). The emergency surgical pathway usually starts with emergency department attendance or urgent surgical clinic referral. Frailty is more prevalent in the emergency surgical group than in elective surgical patients. Each year in the UK, 64,000 adults are admitted with a hip fracture requiring surgery most of whom are frail.[12] Similarly, a quarter of adults undergoing emergency laparotomy and half of patients presenting acutely with critical limb threatening ischaemia to vascular services are living with frailty.[14,15] This may represent an underestimation of the prevalence of frailty as it is not routinely assessed in the perioperative setting. However, with initiatives including the British Geriatrics Society Silver Book II and the Acute Clinical Frailty Network, assessment of frailty in the emergency department is now increasing.[16,17]

The elective surgical pathway usually starts with primary care referral and is followed by surgical consultation and preoperative assessment. However, some elective pathways, most notably those for possible cancer, can involve diagnostic assessment and multidisciplinary decision-making prior to the first surgical consultation. Whilst frailty assessment is increasingly undertaken in primary care, the result is rarely documented in surgical referral letters and the lack of an integrated primary and secondary care electronic patient record can make information inaccessible across sectors.[18,19]

Whilst the timelines for elective and emergency surgery differ, the principles of care for patients identified as living with frailty on each pathway, are the same. As routine frailty screening is not yet embedded into emergency or elective surgical pathways, there can be a lack of timely involvement of teams with frailty expertise and inadequate implementation of interventions to modify the frailty syndrome.[20,21]

The importance of frailty in accurately appraising the risks and benefits of surgery, no surgery and other treatment options is poorly recognised during the process of shared decision making (SDM) both by clinicians and patients.[22,23] This can result in under or overestimation of perioperative risk, with either inappropriate interventions or reduced access to beneficial interventions and the potential for decisional

regret and subsequent decisional conflict.[24,25] These issues are particularly challenging in the emergency setting, where more rapid appraisal of the patient's frailty status and values and wishes is required to facilitate true SDM.

Perioperative complications common in those living with frailty (eg delirium, falls, hospital acquired deconditioning, complex discharge issues), may be predicted if frailty is identified early in the surgical pathway and mitigated using multidisciplinary interventions delivered by a specialist frailty team.[20,26–30] Discussions with patients and their carers should include realistic expectations for physical, mental and functional recovery. Furthermore, clinical teams should be aware of Advance Care Directives or Advance Decisions to Refuse Treatment (ADRT). An existing directive requires consideration and discussion with the patient and/or carers in the context of the proposed intervention.[31]

Whilst the principles of risk assessment, optimisation and shared decision making in people living with frailty are the same in the elective and emergency setting, it can be more challenging to embed these practices into emergency surgical pathways. For example, there may be insufficient time for specialist assessment to appraise and optimise frailty and feed into shared decision making. In addition, in the emergency setting the need for proactive treatment escalation planning is of particular importance. Addressing this requires an understanding of the principles of frailty assessment, the impact of frailty and the potential for modification of risk. Good team working requires a 'trans-disciplinary' approach where core skills are shared and not specific to one discipline. For example, if there is a delay in transfer to an appropriate surgical ward, the key components of care should still be delivered (for example in the Emergency Unit or in a non-surgical ward) by staff working in these areas or by a peripatetic member of perioperative team.

Comprehensive Geriatric Assessment (CGA) is the gold standard for assessment and optimisation of frailty with a robust evidence base in community and medical settings.[26,27,32–36] Evidence is now emerging for the clinical and cost effectiveness of CGA in both the elective and emergency perioperative setting.[37] As a result, perioperative CGA- based services for people living with frailty are being established but are not yet routine outside orthogeriatric medicine.[38–40] The uptake of new models of perioperative care for people living with frailty has been limited by a number of factors; evidence supporting multicomponent interventions for frailty, effective collaboration, commissioning of funded services, availability of workforce, education and training resources and guidelines relevant to the whole pathway. Overcoming these challenges requires a multicomponent approach. This new guideline provides recommendations to facilitate the delivery of quality perioperative care for adults living with frailty undergoing surgery.

What is the anticipated impact of this guideline?

- Improved outcomes for the estimated 300,000 older people living with frailty who undergo surgery each year.
- Effective use of surgical waiting lists as 'preparation lists'.
- Improved general health of people living with frailty.
- Improved shared decision making, ensuring equity, appropriate surgery and avoidance of decisional regret.
- Improved postoperative recovery for people living with frailty.
- Efficient perioperative pathways avoiding duplication and waste.
- Establishment of services aligned to the needs of people living with frailty.
- Equity of access to specialist care.
- Improved trans-disciplinary working and inter-speciality communication.

Standards

1 All hospitals should work with commissioners to develop pathways of perioperative care that comply with the recommendations in these guidelines. C Strong

2 All hospitals should appoint a clinical lead for perioperative frailty. This person should be responsible for developing, implementing, and auditing policies and processes to ensure quality perioperative care for people living with frailty. C Strong

3 All patients aged over 65 years, and younger patients at risk of frailty, referred for elective or emergency surgery, should have frailty status documented at referral, preoperative assessment and admission using the Clinical Frailty Scale (CFS). B Strong

4 All patients living with frailty (CFS≥5) should undergo Comprehensive Geriatric Assessment and optimisation (CGA) prior to surgery, tailored to the time available. B Strong

5 All patients living with frailty (CFS≥5) should have an assessment of cognition documented using a validated tool prior to surgery. B Strong

6 All hospitals should have a guideline for prevention and management of delirium applicable to the perioperative setting. A Strong

7 All hospitals should have a perioperative frailty team with expertise in Comprehensive Geriatric Assessment and optimisation (CGA) providing clinical care throughout the pathway.* B Strong

8 All staff working with patients at risk of frailty should receive training on frailty, delirium and dementia. GPP Strong

9 Adherence to the recommendations in this guideline should be measured and regularly reviewed to inform continuous quality improvement. GPP Strong

*The perioperative frailty team should be multidisciplinary and have expertise in CGA and optimisation methodology to deliver:

- preoperative assessment and optimisation of frailty, cognitive disorders and multimorbidity
- prognostication and shared decision making
- assessment and management of postoperative medical complications, hospital acquired deconditioning, postoperative cognitive disorders
- rehabilitation, goal setting and discharge planning with onward referral to community services
- treatment escalation and advance care planning
- effective communication with patients and carers throughout the perioperative pathway
- streamlined care working with other disciplines and specialities.

Recommendations for people living with frailty and their carers

As a patient aged 65 years and over, or as someone aged under 65 years who is at risk of frailty and being considered for planned or emergency surgery, you should (C):

- expect to be assessed for frailty
- expect to have your memory assessed
- ask questions about your operation, including the benefits, risks, other treatments and what will happen if we do nothing (this is called shared decision making)[22]
- tell your healthcare team about what is important to you in your life and what you want to be able to do in the future
- think about discussing:
  - what is important for your quality of life
  - how surgery or other treatments might affect your day to day life
  - how your other health conditions might affect how you get better after surgery
  - the possibility that surgery may allow you to live longer but with greater care needs
  - survival with or without surgery
  - survival with or without other treatment options
  - complications with or without surgery or other treatment
  - pain management with or without surgery
  - which treatments you would want to consider if there are serious complications after surgery and which treatments you would not want
  - completing a 'what matters to me' document to help you talk to your healthcare team.[41]
- bring any information about your medications or other health conditions to your appointments
- consider coming to appointments with your relative or carer to support you
- prepare for surgery or other treatment in good time. This may include:
  - stopping smoking[42]
  - increasing your physical activity/exercise[43]
  - eating a healthy diet[44]
  - achieving a healthy weight[45]
  - keeping your alcohol intake within recommended levels (<14 units per week) and stopping all alcohol at least two weeks prior to surgery[46]
  - stopping use of illicit drugs[47]
  - preparing mentally for surgery[48]
  - making practical changes and thinking about things you might need at home after your treatment (eg moving your bed downstairs or arranging for your shopping to be delivered)
  - involving your relatives, carers and friends to support you when you leave hospital
  - discussing your financial and care plans with relatives, carers and friends
  - arranging care for any dependants (relatives or friends) who rely on you for their care.
- expect your emotional and spiritual needs to be taken into account at all times
- expect to be provided with information to support your continuing recovery when you go home from hospital

- expect all staff who work with people living with frailty to have had appropriate training to support your care
- expect care from a perioperative frailty team throughout your hospital journey
- expect hospitals to have a clinical lead for frailty.

Recommendations for commissioners and providers of surgical services for people living with frailty

Commissioning bodies should:

- work collaboratively with providers to develop a system approach to support people living with frailty undergoing surgery. This will require cross boundary working with community, primary, secondary, social care and voluntary sector services to develop perioperative pathways for people living with frailty (C)
- work with providers to ensure mechanisms are in place for assessing, optimising and documenting frailty in community, primary and secondary care (C)
- ensure provision of services delivering perioperative CGA-based assessment and optimisation for people living with frailty[26,27,49] (B).

Developing clinical services; hospitals should:

- appoint a clinical lead for people living with frailty with responsibility for the perioperative setting. In smaller settings, this may be the hospital frailty lead, whereas in bigger organisations two roles may be required (C)
- support the clinical lead in developing, implementing, and auditing policies and processes to ensure quality perioperative care for people living with frailty (see metrics). The individual should:
  - work with national initiatives such as Getting it Right First Time (GIRFT), NHS Benchmarking and Health Quality Improvement Programmes (HQIP) to ensure data linkage[50–52] (GPP)
  - support service development through links with organisations such as NHS Elect Perioperative medicine for Older People undergoing Surgery (POPS) network[53] (GPP)
  - signpost local teams to relevant education and training resources[34,54] (GPP).
- have a perioperative care team with frailty expertise (utilising CGA methodology), to provide clinical care throughout the whole perioperative pathway. One example is the Perioperative medicine for Older People undergoing Surgery (POPS) service[53,55,26,27,49] (B)
- support establishment of multidisciplinary and multi-specialty governance, audit, and morbidity and mortality meetings. This will provide a forum from which the clinical lead can deliver quality care and quality improvement (GPP)
- ensure regular funded and documented multidisciplinary team meetings for inpatients to facilitate effective discharge planning (C)
- ensure that multidisciplinary team meetings include the patient view (GPP).

Supporting infrastructure; hospitals should:

- have a strategy to promote and support day surgery for people living with frailty based on British Association of Day Surgery Directory of Procedures[56] (C)
- promote use of Enhanced Recovery (ER) programmes, incorporating this guidance for all surgical patients living with frailty[57,58–60] (B)

- develop common care pathways (eg for hip fracture care or emergency laparotomy). These pathways should be co-designed with patients, carers and the local team delivering care and reviewed regularly[14,60,61] (C)
- ensure protocols for documentation of treatment escalation plans and advance care planning that can be accessed across community, primary and secondary care (eg Coordinate My Care)[62] (C)
- allow necessary variation in the perioperative pathway, when clinically appropriate, eg pauses to the cancer pathway to optimise a long-term condition. This will enable patient-centred assessment, optimisation and facilitation of shared decision making prior to surgery (GPP)
- invest in technologies to support identification of people living with frailty on patient administration electronic systems that can be accessed across community, primary and secondary care (GPP)
- invest in technologies that facilitate recording frailty assessment and tracking of patients living with frailty through their hospital stay (GPP).

Equipping the workforce; hospitals should:

- ensure all staff have access to training and educational opportunities:
  - all staff (including non-patient facing) should complete e-Learning for Healthcare (e-LfH) Tier 1 Skills for Health Care training[63] (GPP)
  - all registered staff members should complete e-LfH Tier 2 Skills for Health Care training and training in delirium[64–66] (GPP)
  - perioperative lead for people living with frailty should complete Tier 3 Skills for Health Care training or equivalent[34] (GPP)
  - all senior decision makers should have access to Tier 3 training (BGS eLearning module) or equivalent[34] (GPP).
- work with training programme directors to develop training opportunities for doctors of all grades in perioperative care for people living with frailty[67,68] (GPP)
- use national resources to develop the nursing and allied health professional workforce to deliver perioperative care for people living with frailty[17,69] (GPP).

Promoting communication; hospitals should:

- support shared decision making through the use of tools such as BRAN (Benefits, Risks and Alternatives of a treatment option and what happens if Nothing is done) in the perioperative setting, acknowledging that this is an iterative process undertaken throughout the pathway[22,70] (C)
- have visiting policies that support inpatient care for people living with frailty and promote initiatives such as John's Campaign[71] (GPP)
- provide written information for people living with frailty about what they can do to prepare and what they can expect in the perioperative pathway[72] (C).

Recommendations for primary care teams

Primary care teams should:

- support and work with people living with frailty to ensure access to the appropriate treatment, therapy and support, including surgery (M)
- start the shared decision making process including promoting an awareness of the potential for non-surgical management options. This may include a move away from 'referral for surgery' to 'referral to explore treatment options'[73] (C).

Primary care teams should *Make Every Contact Count* and use consultations as a teachable moment and an opportunity for brief interventions to address lifestyle modification with proven benefit (supported by patient and carer information)[74] (C). This will include:

- optimisation of co-existing conditions, eg diabetes, hypertension, heart failure, anaemia, pain management[75–77]
- optimisation of medications, eg through use of the STOPP/START tool[78]
- physical activity and exercise[43]
- weight management (noting that if weight loss is deemed beneficial strategies are implemented to preserve lean body mass) and if malnutrition is present strategies to improve nutritional status are utilised[45]
- smoking cessation[42]
- alcohol consumption within government recommended levels[46]
- support with substance abuse[47]
- psychological preparation[48]
- home adaptations to promote independence and facilitate rehabilitation (this should include consideration of caring responsibilities).[79]

Primary care referrals requesting surgical consultations for people living with frailty should include (GPP):

- frailty score (eg Clinical Frailty Scale (CFS), electronic frailty index (eFI), Edmonton Frailty Scale (EFS)[17,34,18,80]
- nutritional status or body mass index (BMI)
- presence, severity and management of comorbidities (eg anaemia – haemoglobin, diabetes – glycosylated haemoglobin, chronic kidney disease – estimated glomerular filtration rate etc)
- presence of cognitive impairment and any diagnosis of dementia or previous episodes of delirium
- list of all current medications (including dose/route)
- current functional abilities
- current caring responsibilities
- details of Advanced Care Directives (ACD) and Advanced Decisions to Refuse Treatments (ADRT) or named lasting power of attorney (LPA) for health and welfare
- proactive initiation of the CGA process in the community or referral to local CGA clinics.[35]

Recommendations for staff working in surgical outpatients and preoperative assessment services

To preoperatively assess, surgical and preoperative assessment teams should:

- review information from community and primary care regarding frailty status (GPP)
- reassess and document frailty status using a validated tool (CFS) for all patients aged over 65 years and in patients aged under 65 years at risk of frailty[17] (B)
- document syndromes or conditions that often coexist with frailty; sarcopenia, malnutrition, multimorbidity, and cognitive impairment (4AT, Montreal Cognitive Assessment, MoCA)[81,82,7,9,83] (C)
- ensure that up to date information on functional status is available (GPP).

To preoperatively optimise, surgical and preoperative assessment teams should:

- refer people living with frailty or associated syndromes to a perioperative frailty team with expertise in CGA (CFS≥5) (B)
- if they have no access to a perioperative frailty team with expertise in CGA then apply the frailty intervention tool (see Table 1) (GPP)
- identify and refer patients who would benefit from comprehensive medication review to a perioperative frailty team with expertise in CGA or a specialist pharmacist, based on: (B)
  - polypharmacy (five or more daily medications)
  - anticholinergic burden[84]
  - delirium precipitants
  - medications that may precipitate acute kidney injury or hypotension.[85]
- identify and refer patients with malnutrition or obesity to dietetic services[86] (B)
- Make Every Contact Count; use each consultation as a teachable moment or as an opportunity for brief interventions to address lifestyle modification that has proven benefit (supported by patient and carer information, written or provided in other modality): (C)
  - increased physical activity and exercise[43]
  - weight management[45]
  - nutrition and hydration[44]
  - smoking cessation[42]
  - alcohol consumption within government recommended levels[46]
  - psychological preparation[48]
  - optimisation of sensory impairment (eg spectacles, hearing aids).
- refer to the NHS England document detailing preoperative assessment and optimisation processes[87] (C).

To support decision making, surgical and preoperative assessment teams should:

- undertake and document individualised shared decision making considering the benefits, risks, and alternatives to surgery (including doing nothing), taking into account the impact of frailty on postoperative outcomes including morbidity, mortality, functional and cognitive status, quality of life and expected survival in those living with frailty[22,70] (C)
- apply the seven principles of decision making and consent according to General Medical Council guidance for consent (September 2020).[88] If the patient is assessed as not having capacity to consent to the intervention, the appropriate legal framework should be applied[89] (M)

- what will and will not happen if complications occur, both in terms of surgical/medical treatment and potential impact on functional status necessitating social care, eg kidney complications may result in the need for dialysis or functional decline may result in the loss of independence requiring a new or increased care package or discharge to a care home (GPP)
- undertake discussion with the patient regarding who they would like to be informed about their care. Aim to proactively communicate with carers and families as patients wish, regarding preoperative optimisation, anticipation of complications and discharge related issues, benefits, risks, alternatives to surgery and advance care planning (GPP)
- proactively advise patients living with frailty to consider involving their relatives and carers: (GPP)
  - in discussions about their treatment
  - in the practicalities of the surgical admission (eg arranging for a family member to stay overnight after day surgery, rearranging furniture after a joint replacement, planning what support they are able to provide after surgery for example help with domestic chores, meal preparation)
  - in considering treatment escalation and advance care plans
  - in supporting the patient's recovery through actively participating in delirium management, avoidance of deconditioning.[90,91]
- ascertain presence of pre-existing Advanced Care Directives, Advance Decisions to Refuse Treatment, 'do not attempt resuscitation' orders and 'treatment escalation plans'. Ensure documentation is complete and available (C)
- discuss Advanced Care Directives and Advance Decisions to Refuse Treatment. This should include an explicit discussion about what may happen prior to the planned date for surgery (eg if an aortic aneurysm ruptures prior to the date for surgery) (C)
- proactively communicate with the next of kin or person with lasting power of attorney (LPA) for health and welfare in above discussions if the patient does not have capacity to make their own decisions. If the patient does not have capacity and there is no next of kin, then the appropriate legal framework should be applied[89] (M)
- proactively advise and provide information to patients living with frailty or to their next of kin/LPA where the patient does not have capacity about: (GPP)
  - the availability of, need for and how to access social care services
  - what can be provided by health and social care services.[92]

To plan the perioperative period, surgical and preoperative assessment teams should:

- promote day surgery or admission on the day of surgery for people living with frailty wherever possible, using the same principles as those used when considering patients without frailty[93] (C)
- ensure use of Enhanced Recovery (ER) programmes that include interventions for frailty[57] (B)
- plan and document the perioperative period including: (C)
  - admission plan (timing, day, place, and medication changes)
  - place of postoperative care using risk assessment informed by validated tools supported by an end of surgery bundle, according to other guidelines[94,95]
- advise patients what to bring, for example prosthetic limbs, sensory aids, devices used for sleep apnoea and wheelchairs etc (GPP)
- plan and document the discharge plan including patient and carer roles, anticipated rehabilitation and social care requirement, place of discharge (GPP).

Recommendations for staff working in surgical wards providing care for emergency and/or elective surgical patients

Ward staff should follow recommendations from the previous sections when caring for patients admitted electively or as an emergency. In addition, the following recommendations exist.

To anticipate and prevent complications, ward staff should:

- proactively screen for delirium daily (eg using a validated tool such as 4AT)[82,96] (B)
- proactively document delirium, implement delirium guidelines and discuss with patient and carers[90,97] (B)
- assess, document and manage pain, using relevant pain assessment tools and interventions (minimise opioid use as much as possible cognisant of the risk profile of those living with frailty, dose according to weight and involve specialist pharmacists, pain team or frailty team as appropriate)[98] (B)
- proactively assess, investigate and treat common postoperative medical complications including acute kidney injury, hospital acquired pneumonia, cardiac complications, constipation, and urinary retention etc (C)
- ensure patients have access to dentures and sensory aids, and ensure safe-keeping of such aids (GPP)
- use strategies to minimise hospital acquired deconditioning (including DrEaMing):[99] (C)
    - ensure early referral to therapy/dietetic teams
    - encourage bed-based exercises and early mobilisation
    - support nursing staff to assess ability to mobilise without waiting for therapy team advice
    - encourage walking to the toilet rather than relying on bedside facilities
    - encourage sitting out of bed for as long as tolerated during the day
    - encourage eating and drinking, ideally out of bed
    - provide hydration and nutritional intake to address the surgical stress response and mitigate loss of muscle mass, strength and functional status
    - encourage washing and dressing (ideally in own clothes) and promote independence to undertake as many tasks as able
    - remove catheters/drains/other attachments as soon as appropriate to reduce impact on mobility and reduce delirium risk
    - prevent and/or manage any pressure injury.
- be alert to patients who were not frail preoperatively but who develop hospital acquired deconditioning and may require referral to the perioperative frailty team with expertise in CGA[34,26,27,32,33,100,101] (B).

To promote recovery and timely discharge, ward staff should:

- adhere to Enhanced Recovery programmes[57,58] (B)
- ensure a proactive, planned approach to safe, timely and effective discharge. This should occur from the moment surgery is contemplated, in parallel with ongoing medical and surgical intervention and with active engagement with discharge community and social care teams (C)
- proactively review, document and enact the discharge plan including: (GPP)
    - explicit discussion of patient and carer roles
    - anticipated rehabilitation and social care requirement
    - place of discharge.
- proactively identify and address potential barriers to discharge (GPP)

- ensure timely communication about discharge plans with community, primary and social care (including discharge to assess)[102] (C)
- develop links with palliative care and community support services for occasions when a non-operative approach is taken or for symptom control especially when prognosis is limited (GPP).

To promote effective communication ward staff should:

- ensure there is relevant expertise and sufficient time allowed on ward rounds to address all aspects of care and communicate effectively with patients living with frailty[103,104] (C)
- participate in a regular multidisciplinary team meeting (MDTM) where all inpatients with frailty are discussed: (C)
    - this may be a virtual or face to face meeting
    - the frequency will be informed by the surgical population (this may be a daily board round or a weekly discharge MDTM) and influenced by the acuity and length of stay of the patient group)
    - discussion and documentation of the following should occur:
        - progress; medical, surgical and functional complications
        - treatment; medical, surgical and rehabilitation
        - review, discussion and documentation of treatment escalation plans and advance care plans
        - discharge plans.
- ensure discussion with patients regarding who they would like to be informed about their care. Aim to proactively communicate with relatives/carers as patients wish, regarding: (M)
    - postoperative progress and complications
    - discharge related issues
    - treatment escalation and advance care plans
    - expected prognosis.
- establish a method of communication for the patient to contact relatives/carers (phone/tablet/money for bedside phone) to reduce the impact of an unfamiliar hospital environment[105] (GPP).

Specific considerations in the emergency setting

In addition to the recommendations above, staff working with patients admitted through emergency departments or surgical admission units should:

- obtain and document a collateral history, drawing on input from relatives/carers, paramedic crews, General Practitioners or other community teams where applicable including the presenting complaint, comorbidities, living arrangements, level of mobility and any aids used, functional status, mood, memory, continence etc (GPP)
- ensure documentation of contact numbers for care providers if available (GPP)
- be aware of atypical presentations of surgical pathology that are common in older people living with frailty (eg delirium as the presenting complaint in a patient with an acute abdomen) (B)
- ensure usual attention to physiological optimisation and pain management of the emergency surgical patient[106,107] (B)
- proactively undertake SDM and treatment escalation planning, taking prior Advanced Care Directives and Advance Decisions to Refuse Treatment into consideration, as detailed in previous sections, regardless of the short timeline[22] (C)

- proactively involve relatives, carers and advocates in supporting SDM, using the appropriate legal framework if the patient lacks capacity (M)
- follow established care pathways for emergency surgery, for example hip fracture, emergency laparotomy, silver trauma[14,60,61,108–110] (C)
- refer patients living with frailty (CFS≥5) or associated syndromes to teams with frailty expertise regardless of the short timeline[20,28](B)
- if there is no access to a perioperative frailty team with expertise in CGA, then apply the frailty intervention tool (see Table 1) regardless of the short timeline (GPP)
- assess, document and modify risk factors for delirium[90,97] (B)
- screen all patients with CFS ≥5 daily for delirium using a validated tool such as the 4AT and prevent and manage delirium according to hospital guidelines[96,97] (B).

Recommendations for staff in theatre and recovery

Before surgery, theatre and recovery staff should:

- use enhanced recovery pathways[57,58,60] (B)
- use information provided by teams earlier in the perioperative pathway to develop an individualised intraoperative plan (GPP)
- discuss frailty at the World Health Organisation (WHO) team briefing[111] (GPP)
- be aware of conditions that often coexist with frailty, such as delirium and ensure adherence to guidelines for prevention and management of delirium[90,97] (B)
- consider list order to avoid prolonged starvation times and enabling medications to be given on time (B).

During surgery, theatre and recovery staff should:

- ensure senior anaesthetic and surgical input, particularly for emergency cases given the higher risk of perioperative morbidity and mortality in this patient group[13,14,109,112] (C)
- facilitate the presence of a relative or carer in the anaesthetic room and/or post anaesthetic recovery area for patients with sensory and/or cognitive impairment when appropriate (GPP)
- avoid the use of unnecessary urethral catheters to reduce the risk of a hospital acquired catheter related urinary tract infection. Where this cannot be avoided the catheter should be removed as soon as possible[113,114] (A)
- employ strategies for moving and positioning the patient living with frailty. This might include the adoption of novel positioning techniques which protect impaired musculoskeletal and integumentary systems:[115,116] (B)
  - lifting in preference to sliding patients
  - use of gel type pressuring relieving supports to help secure a specific posture and avoid movements outside of an individual's normal range of motion[115–117]
  - application of soft padding or cotton wool bandages to potential pressure areas.
- ensure physiological homeostasis intraoperatively, with strategies to maintain normothermia, targeting mean arterial blood pressure within 20% preoperative range, consider use of depth of anaesthesia monitoring and regional anaesthesia techniques where appropriate to reduce postoperative opioid use[106,107,118] (B)
- formulate a pharmacological strategy to avoid anticholinergic load; avoidance of benzodiazepines, cyclizine and tramadol, use glycopyrrolate instead of atropine[123]

After surgery, theatre and recovery staff should:

- clarify postoperative care requirements and the appropriate setting (level 1, enhanced care, level 2, level 3), prior to and at the end of surgery, according to pre- and postoperative risk assessment and in accordance with the patient's wishes and advanced care plan[119] (C)
- ensure patients have access to dentures and sensory aids in recovery (GPP)
- document the acceptable parameters or individualised recovery discharge criteria prior to leaving recovery area and handover to ward (C)
- assess, document and treat pain utilising relevant scoring system such as the Abbey or PAINAD scale for patients with cognitive impairment. Consider opioid sparing analgesia and avoidance of NSAIDs where possible[120–122]
- document a postoperative management plan for pain which should be cognisant of the relationships between frailty, cognitive impairment, pain, analgesics and delirium.

Recommendations for transfer of care to the community

Teams working in postoperative wards should ensure provision of timely (day of discharge) written discharge documentation to the patient and primary care team to include:[124] (GPP)

- surgical diagnosis and procedure
- new diagnoses made during admission
- in-hospital complications (medical, surgical and functional)
- any significant functional or cognitive change (including delirium and advice to seek review if it fails to resolve)
- changes made to medications during the hospital stay (patients who may benefit from extra guidance about newly prescribed medicines should be referred to the Discharge Medicines Service)
- signposting and/or referral to relevant services and follow up plans (eg referral to community therapy, dietetics, district nurse, medical clinic, delirium follow up clinic, interval imaging, surgical out patients)
- signposting and/or referral to third sector organisations where appropriate
- details on who to contact for advice regarding post-surgical issues, medication queries and future management
- patient education to promote long-term healthy behaviours
- treatment escalation and advance care plans.

Recommendations for quality improvement and metrics

The clinical lead for (perioperative) frailty should support implementation of this guideline, through local quality improvement programmes. This will require:

- patient and public involvement in co-design/co-production
- identification of local key performance indicators based on the metrics below
- collaboration with local data analysts/informatics to support robust data collection (ideally through linkage with existing datasets, for example Getting it Right First Time, Perioperative Quality Improvement Programme, National Hip Fracture Database, National Emergency Laparotomy Audit)[12,14,50,125]
- local measurement using a time series approach (eg statistical process control charts)
- local collaborative, interdisciplinary audit/morbidity/mortality meetings to review the data and inform quality improvement programmes.

To support measurement for improvement the following metrics may be used:

Metrics to support development of clinical pathway

- Number/proportion of patients with documentation of frailty
- Number/proportion of patients with frailty referred to perioperative frailty services for Comprehensive Geriatric Assessment and optimisation (CGA) or pharmacy services
- Number/proportion of patients with frailty, in whom a non-operative approach is taken, who are referred to perioperative frailty services or palliative care for ongoing conservative treatment
- Number/proportion of patients with frailty in whom an assessment of cognition is documented
- Number/proportion of patients living with frailty who have documentation of shared decision making
- Number/proportion of patients living with frailty who have documentation of treatment escalation plans and advance care plans.

Metrics to measure process

- Hospital guideline for prevention and management of delirium applicable to the perioperative setting.
- Length of hospital stay in patients with CFS≥5
- Percentage of patients with LOS > 21 days with CFS≥5 (superstranded)
- Place of discharge from hospital
- 30 day readmissions in patients with CFS≥5.

Metrics to measure patient reported outcomes

- Decisional regret
- Satisfaction with shared decision making (eg using SDMQ9)[23]
- Quality of life measures such as EQ-5D-5L[126]
- Days alive and out of hospital.

Metrics to support workforce development

- Availability of a perioperative frailty team such as Perioperative medicine for Older People undergoing Surgery (POPS) team
- Number/proportion of staff working with patients living with frailty who have completed tier 1, 2 or 3 training.

Recommendations for research

- What is the clinical and cost effectiveness of perioperative frailty services in the elective and/or emergency surgical setting (excluding orthogeriatrics)?
- What is the experience for patients living with frailty of:
  - undergoing preoperative CGA based intervention for frailty?
  - perioperative shared decision making?
  - undergoing emergency and/or elective surgery?
  - the impact of surgery on longer term functional and psychological recovery?
  - decisional conflict and regret (having surgery or deciding not to have surgery)?
- How can we improve quality of perioperative consultations for patients living with frailty?
- What are the barriers to implementing frailty services on a national scale (examining feasibility, acceptability, uptake, fidelity)?
- Do perioperative outcomes for patients living with frailty and multimorbidity differ and how should this inform service development?
- Can we develop decision aid tools for patients living with frailty undergoing surgery?
- What is the skillset required for teams providing perioperative care for people living with frailty? (In particular, in services running at all hours, what is the minimum skillset required when specialised staff are not available).
- How can we improve transitions of care from one healthcare environment to another in the perioperative pathway?

Frailty Pathway

Emergency admission

Assess and document frailty (CFS).

Consider atypical presentations of surgical pathology associated with frailty.

Obtain timely collateral history.

Establish presence of ACD, ADRT, DNAR decisions and LPA for health and welfare, and agree treatment escalation plan.

Refer to perioperative frailty team/other services for optimisation, or use frailty intervention tool.

Assess, document and modify risk factors for delirium.

Undertake SDM and consider involving relatives and/or carers.

Follow emergency care pathways.

Primary care referral for elective surgery

Start SDM including discussion about non-surgical options.

Make Every Contact Count; medical and lifestyle optimisation.

Referral to include:

- frailty score (CFS/eFI)
- presence, severity and management of comorbidities
- presence of ACD, ADRT, DNAR decisions and LPA for health and welfare.

Surgical and preoperative assessment out-patient services

Use information from primary care.

Reassess and document frailty.

Refer to perioperative frailty team/other services for optimisation, or use frailty intervention tool.

Establish and review existing ACD, ADRT, DNAR decisions and LPA for health and welfare, and agree treatment escalation plan.

Undertake SDM including discussion about non-surgical and palliative surgical options.

Consider involving relatives and/or carers.

Plan admission and discharge.

In theatre and recovery

Consultant surgeon and anaesthetist involvement for high-risk cases.

Identify frailty and co-existing conditions at the WHO team briefing.

Employ strategies for positioning and moving cognisent of frailty.

Ensure physiological homeostasis cognisent of frailty.

Informed by frailty status and agreed treatment escalation plans, anticipate postoperative care requirements and setting, and review again at the end of surgery.

Surgical wards providing care for emergency and/or elective patients

Assess and document frailty.

Anticipate, prevent, and treat:

- delirium
- pain
- medical and surgical complications
- hospital acquired deconditioning.

Review treatment escalation plans.

Promote recovery and timely discharge:

- review discharge plans
- regular multidisciplinary team meeting
- proactive communication with patients and consider involving relatives and carers.

Transfer of care to the community

Ensure timely and comprehensive written discharge information to patient and GP, including:

- diagnoses
- treatment (operative and/or non-operative)
- complications
- continuing medical and/or functional impairments
- medication changes
- follow up plans and referrals
- safety-net advice and points of contact
- patient and carer education
- agreed escalation and advance care plans.

Underpinning principles

Iterative Shared Decision Making; Streamlined communication and documentation; Comprehensive Geriatric Assessment and optimisation; Multispecialty, multidisciplinary working.

Table 1 Frailty Intervention Tool[127]

Frailty domain	Assessment	Intervention
Cognition	History/collateral history Use tools for objective assessment including 4AT, Clock (as part of Edmonton Frailty Scale, EFS), mini-Cog, Montreal Cognitive Assessment (MoCA) Assess risk of delirium by considering predisposing factors (age/dementia etc) or precipitating factors (pain/infection/emergency surgery etc) Formulate differential diagnosis Assessment of capacity specific to the decision	Vascular risk factor optimisation Modify risk of delirium Consider referral to memory services Information provision to patient and carer to include diagnosis of cognitive impairment/dementia Provision of patient and carer information about delirium
Activities of daily living	History/collateral history Nottingham Extended Activities of Daily Living (NEADL) Barthel	Address care needs Consider referral to occupational therapist Consider referral to social worker
Physiological/functional status	Self-reported exercise tolerance Gait velocity Timed up and go Six minute walk test Sit to stand in 1 minute Consider cardiopulmonary exercise testing	Discuss strategies to improve physical activity The UK Chief Medical Officer has recommended daily exercise for very frail people: 'reducing sedentary behaviour, engaging in regular sit-to-stand exercise and short walks, stair climbing, embedding strength and balance activities into everyday life tasks, and increasing the duration of walking' Consider referral for exercise therapy/prehabilitation programmes Consider referral for physiotherapy and/or occupational therapy
Medication use	History/collateral history Number of medications Concordance with medication	Review/rationalise medications STOP/START Consider anticholinergic burden Consider provision of monitored dosage system Consider carer to prompt medication use

Frailty domain	Assessment	Intervention
Nutrition	History/collateral history Use a validated nutritional screening tool such as: the Patients Association Nutrition Checklist, Malnutrition Universal Screening tool (MUST).[128]	Assess and address oral health including dentition Consider referral to speech and language therapy if there are swallowing concerns Advise on optimal nutritional intake, including adequate protein and fluids Consider referral to dietitian to support with optimisation of nutrition and hydration status in those at risk of malnutrition Consider referral to NHS tiered care weight management pathways acknowledging importance of preserving muscle Consider referral to occupational therapy if unable to manage shopping and/or meal preparation
Mood	History/collateral history Self-reported low mood Hospital Anxiety and Depression Score (HADS) Geriatric Depression Scale (GDS) Formulate differential diagnosis	Psychological preparation for surgery Liaise with primary care Consider referral to Improving Access to Psychological Therapies (IAPT) Consider referral to specialist psychiatric services Consider referral to voluntary sector services
Continence	History/collateral history Self-reported urinary/faecal incontinence Post Void Residual Volume (PVRV) Formulate differential diagnosis	Consider bladder training regimes and pelvic floor exercises If medications are considered, need to be balanced against anticholinergic burden Consider referral to continence services Proactive assessment and management of urinary retention and constipation
Social support	History/collateral history Lubben Social Network Scale 6	Consider referral to social worker or occupational therapist for therapeutic interventions Arrange formal and voluntary sector support

Overlapping syndromes		
Multimorbidity	History/collateral history/examination CGA approach to proactive diagnosis of previously unrecognised conditions Formulate list of diagnoses Anticipate, prevent and treat medical complications	Formulate an optimisation plan for preoperative/perioperative and long-term management of each condition Refer to relevant national guidelines for example CPOC diabetes, AAGBI/BHF hypertension, AAGBI dementia[129] Use interventions including DrEaMing[99]
Sarcopenia	History/collateral history/examination SARC-F Review cross sectional imaging where available Stand up/sit down test Gait speed	Consider contributing factors (eg physical activity and nutrition) Employ exercise strategies Utilise appropriate nutritional strategies including[130] optimising protein intake and improving nutritional status Consider referral to a dietitian
Falls	History/collateral history/examination Timed up and go Formulate differential diagnosis	Review medications Refer for muscle and balance exercise programmes Refer for occupational therapy interventions for review of function, behaviour related activities and home environment. Consider need for podiatry and orthotics Address bone health, and optimise nutrition and hydration status to improve the effectiveness of exercise programmes

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APPENDIX 1
CPOC Guidelines Development Process Document

This document outlines the process by which any new guidance will be developed by the Centre for Perioperative Care (CPOC).

This document will be made available to stakeholders who work, or want to work with CPOC, on producing guidance documents.

1 Governance

The overall development of CPOC guidelines is overseen by the CPOC Board.

Responsibility for managing the scope of the document, and providing clinical oversight to the guidelines technical team is delegated by the CPOC Board to the CPOC Executive.

A working party will be appointed by the CPOC Executive to develop that guideline, taking into consideration resource implications and budget. In the event of disagreement between members of the working party, the majority rules consensus method is used, with the Chair of the Working Party holding the deciding vote. The working party will be disbanded upon publication of the guideline. The CPOC Executive will approve the terms of reference for each working party.

The CPOC Executive reviews each guideline and provides comment prior to any stakeholder or public consultation. The CPOC Board, or their delegate, is responsible for sign-off before final publication.

2 Recruitment

Each working party will be supported by a technical team that includes a researcher to perform the literature searches and a project coordinator to provide project management and administrative support.

CPOC strongly supports diversity of experience, including gender, ethnic diversity, institution and work role. Individuals with practical experience working in a high-pressure clinical environment and/or understanding of how to use processes or teaching to get a common understanding across staff groups are particularly welcome.

Recruiting the Chair of the working party

Experts are chosen based on their reputation, previous work on the topic, their reliability and availability. Once approved by the CPOC Executive, the expert is formally invited to undertake the role as Chair of the working party.

Recruiting the working party members

All appointments to the working party will be confirmed by the CPOC Executive. It is anticipated that the working party for most guidelines will include around ten members, including, but not limited to; the chair, relevant multidisciplinary representation from a range of specialties, regions across the UK, lay members to represent the interests of patients, and subject-matter experts.

Relevant specialist organisations will be invited to nominate representatives to the working party. Other stakeholders may also be invited to contribute where deemed appropriate. It is very important that the representative understands their role in two-way dialogue, including eventual dissemination of the guideline to membership of the specialist organisation. Organisations selecting representatives are strongly encouraged to consider a diversity of experience, including gender, ethnic diversity, institution and work role.

The composition of the working party will be agreed by the CPOC Executive during the scoping phase.

Patient/lay membership

Lay representatives will be included from the CPOC Board, the Royal College of Anaesthetists' (RCoA) Lay Committee or other CPOC partner lay groups. Where appropriate, other organisations that represent a particular group of patients may be invited to nominate a representative to the working party.

3 Planning the Guideline

Scope

Once recruited, the chair of the working party, CPOC coordinator and researcher will agree upon a 'scoping document' for the guideline, which will be submitted to the CPOC Executive for approval, within a defined time period. The scoping document will indicate the following information:

- the overall objective of the guideline
- the healthcare questions covered by the guidance
- the procedures and interventions that are to be included as part of the service, and those that are to be excluded. At a minimum, this should include information about the target patient group and the clinical areas to be covered
- the situation in which the guidance is expected to be used, ie the target audience for the guideline.

The CPOC Executive will decide whether the scope submitted is sufficient for that topic to merit a separate guidance document rather than incorporation into existing guidance. The CPOC Executive will liaise with the chair of the working party about adding any areas that they feel should be included/excluded in the scope prior to development of the guidance commencing.

The agreed scope will be communicated to the working party and CPOC Board.

Search protocol

The researcher will discuss the search strategy with the working party, to agree upon the relevant keywords and search terms.

The search protocol should include the following information:

- databases/search engines to be used and the search terms to be entered
- who will undertake the search
- inclusion and exclusion criteria of the search
- dates when the searches will take place
- data abstraction and grading system method
- details of who will undertake the literature grading process.

The agreed data collection and literature review strategy will be communicated to the working party and summarised in the published guideline.

Literature grading system

The literature will be graded in accordance with the CPOC literature grading system, to ensure consistency across CPOC guidance. This has been adapted from Eccles M, Mason J (2001) How to develop cost-conscious guidelines. *Health Technology Assessment* 5:16 and Mann T (1996) *Clinical Guidelines: Using Clinical Guidelines to Improve Patient Care Within the NHS*. London: Department of Health.

Timeframe

The timeframe for development of the guidance will be set by CPOC Executive, with advice from the project team. Relevant timings will be communicated to the working party and form part of the Terms of Reference for that working party.

Progress reviews are submitted to every CPOC Executive and CPOC Board meeting by the project team.

4 Drafting the guidance

Systematic literature review

The systematic literature review and data abstraction will be conducted by the researcher based on the search protocol and scoping document. The search strategy will be a three-step process. The initial search through MEDLINE and CINAHL will provide a source of analysis for index terms. Then a second search using all identified keywords and index terms will be done across MEDLINE, EMBASE, CINAHL and the Cochrane Database. Thirdly, the reference list of all the identified reports and articles will be searched for additional studies. The study inclusion and exclusion criteria are determined prior to commencement of the literature search.

A first sift, based on paper titles, will be conducted by members of the working party. Once selected for second sift, the applicable literature will be ordered by the researcher and forwarded to members of the working party to review and grade according to the chosen critical appraisal tools. Quantitative papers will be reviewed for methodological quality based on the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (MAStARI) appraisal form. Qualitative papers will be reviewed based on the Joanna Briggs Institute Quality Assessment and Review Instrument (QARI) appraisal form. The results of this literature review will be communicated to the full working party, who will use the data to formulate the recommendations of the guideline.

Drafting the recommendations

The working party will be responsible for drafting the majority of the text.

Any disagreements on the recommendations will be resolved using a voting system. Where two people are in disagreement and agreement cannot be reached through discussion, an open vote will take place. If agreement is still not reached by a simple majority, the chair will hold the deciding vote.

All working party members will be given a copy of the CPOC style guide for formal publications and expected to adhere to it. All guidelines will include a section called "About these guidelines" that will include details about the methodology used.

The project team is responsible for ensuring that drafts are submitted in the correct format to the CPOC Executive.

Grading the recommendations

Each recommendation will be graded by the authors using the approved CPOC recommendation grading system, to ensure consistency across CPOC guidance. The working party assess each recommendation, taking into account the weight of evidence and give each recommendation an overall strength grade.

A summary table of the literature and recommendation strength grades for each recommendation will be included in the published guideline and the full recommendations grading material made available on request.

The CPOC pathway approach

It is recommended that guidance follows the perioperative pathway and for it to be inclusive of all team members. For example, there may be little evidence on the referral of patient, but this should still referenced in the guidance, if appropriate. If considered necessary, some guidance may be annotated that this is expected care, or comment that further research is required, or state that CPOC have made a pragmatic decision to proceed with this recommendation for this stage.

5 Consultation

Once the working party has agreed a draft for consultation with the project team, the project team will arrange for the document to be circulated to the CPOC Executive for comment with an appropriate deadline (at least two weeks). The working party will accept proposed changes or provide reasons why they have decided against doing so.

The project team will agree a consultation strategy with the working party and CPOC Executive, including when internal and external stakeholders will have the opportunity to comment on the draft.

In the event of a closed consultation with selected external stakeholders, the project team will circulate an agreed draft to the stakeholders for comment with an appropriate deadline (at least four weeks). The working party will accept proposed changes or provide reasons why they have decided against doing so. The consultation response, along with the final draft of the document, will be provided to external stakeholders prior to publication of the document.

In the event of a public consultation, the consultation draft will be available on the CPOC website for public access, with an open invitation to comment. Notice of the consultation will be circulated to external stakeholders and all CPOC partner members. The public consultation period will be at least four weeks to allow for all stakeholders to have ample time to read and comment on the draft.

Following the close of the public consultation, proposed changes will be sent to the working party who will be given the opportunity to accept or reject them. Where they reject a proposed change, they must explain their reasoning for this. Consultation responses will be available to respondents on request.

6 Publishing

Following the conclusion of consultation, the CPOC Board, or their delegate, will be requested to authorise publication of the final document.

When the final draft has been signed off, the guideline will be published on the CPOC website. All CPOC partners will be expected to publicise CPOC approved guidance via their websites and networks.

7 Updating the guidelines

Each published document should have a date of publication. The CPOC Executive will set the anticipated revision date upon publication. The standard revision date will be three years from publication for guidelines on the clinical management of patients and five years from publication for all other guidance. The CPOC Executive will review any feedback received on the guidance in the interim and will decide whether any new evidence necessitates the guidance is updated.

At least every five years guidance will be submitted to a full review involving reconvening the working party (or appointment of a new, appropriately qualified working party), and the process begins again.

APPENDIX 2
Search Strategy for CPOC Frailty May 2021

Key to Search

.mp after the search terms e.g. **assessment.mp**. will search in title, abstract, subject heading and other fields.

Medical Subject Headings (MeSH) is denoted by **/** after the search term e.g. **anesthesia/** will search for matching content rather than text

A star * or dollar sign **$** finds variant word endings e.g. **child*** finds child, childhood, children

A hash **#** finds different characters within a word e.g. **wom#n**

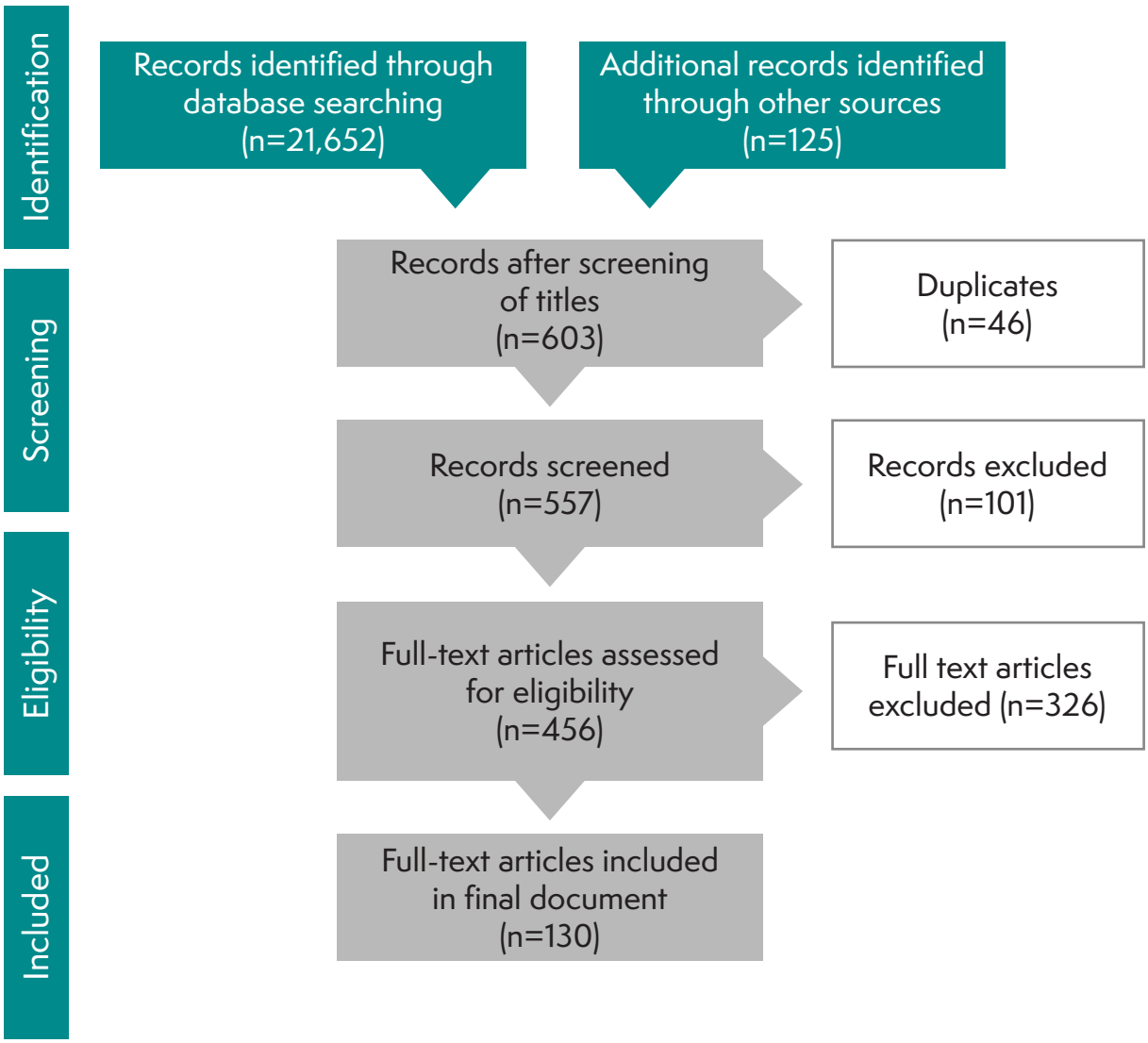
A **?** inside a word replaces zero or one character e.g. **gyn?ecology** or **an?esthesia**

ADJ searches for words adjacent to each other and only separated by a single space [Example: blood pressure or blood ADJ pressure]

OR retrieves any or all of the search terms [Example: heart attack OR myocardial infarction]

Frailty/
(Primary adj Care).mp. OR General practice/
Preoperative care/ OR preoperative treatment/ OR preoperative period/
Intraoperative period/ OR intraoperative care.mp. OR intraoperative treatment.mp.
Postoperative period/ OR Postoperative care/ OR postoperative treatment.mp.
Perioperative period/ OR peroperative care/ OR peroperative complication/
Elective Surgery/
Emergency Surgery/
Hospital discharge/ OR Discharge.mp.
Discharge planning.mp.
Electronic Frailty Index.mp.
Clinical Frailty Scale.mp.
Comprehensive Geriatric Assessment.mp.
Multimorbidity.mp. OR multiple chronic conditions/
Cognition/
Delirium bundle.mp.
Falls bundle.mp.
Delirium/
Falls.mp. or Falling/
Nutrition/
Acute kidney failure/
Acute coronary syndrome/
Hospital acquired pneumonia/
Urinary catheter/
Deconditioning/
Thermoregulation/
Decubitus/
Community services.mp. OR community care/
Patient information/ OR patient resources.mp.
Screening/

APPENDIX 3
PRISMA Flow Diagram



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Information correct as at September 2021