NHS

GIRFT
GETTING IT RIGHT FIRST TIME

NHS IMPACT
Improving Patient Care Together

Preoperative assessment services guidance

July 2023

GIRFT is part of an aligned set of programmes within NHS England

Contents

Introduction

This guidance is for non-medical pre-assessment leads, clinicians and managers, who want to embed best practice in their preoperative assessment processes.

This guide should be used alongside the guide for earlier screening, risk assessment and health optimisation, the digital playbook for perioperative pathways, and local and national protocols.

Preoperative assessment (POA) teams play a highly important role in the perioperative care pathway. POA services are a critical part of elective recovery in the NHS, by improving theatre utilisation rates. **Good practice in POA services supports a patient centred approach to care.** This guide refers to adult POA services but there are fundamental principles that would be applicable to children and young person services.

This guide is aligned with national programs of work in perioperative care, including the high-level principles of practice agreed by the following national teams:

- Getting It Right First Time (GIRFT) and ‘Right Procedure, Right Place, Right Time’
- The National Theatre Programme
- Perioperative care programme

Principles of preoperative assessment

1	Patients on a waiting list for an operation should only be given a 'to come in' (TCI) date and added to an operating list when they have completed their preassessment. For urgent surgery, such as cancer surgery, this will require a pathway that can achieve this in the appropriate time scale.
2	A list of pre-assessed and ready patients should be maintained, who can be added to operating lists at short notice to fill any gaps and optimise use of capacity.
3	POA, theatre and scheduling teams should work together and take a common approach to prioritising, scheduling and booking patients, for example being consistent when a TCI date is offered and how the patient is informed.
4	Potential risk factors for post-operative complications and longer lengths of stay should be identified as early as possible, through early screening, involving patients in their care and setting expectations.
5	Staffing structures should include a range of roles, with job descriptions reflecting competency frameworks and staff deployed to assess patients of an appropriate risk category. Maximum use should be made of clinical skills and decision support tools and there should be opportunities for skill development. The staffing structure should allow for an 80% nurse-led model.
6	Preoperative assessment should increase the use of day surgery, high-volume low-complexity (HVLC) care pathways and where appropriate delivery of care outside of a traditional theatre setting (Right Procedure, Right Place)
7	Training schemes should be sustainable so that the preoperative workforce is recognised as a skilled and distinctive area of practice in perioperative medicine.

Checklist

Priority 1 **Staffing**	Priority 2 **Protocols and guidance**	Priority 3 **Process and pathways**
• Senior Leadership responsible for staffing, service improvement, quality improvement and audit • Specific job descriptions for all staff working within POA • Competency frameworks outlining roles and responsibilities • Staff template for POA capacity based on local trust data/ pathways in place • Telephone/ Digital update clinics for expired POA • Investigation/ pre-op testing clinics run by non-qualified support staff • Face-to-face reviews using the correct resource and time dependant on patient history/ operation type • Appropriate numbers of trained Admin & Clerical staff	• Staff Induction Package for all staff within POA • Pathways of care for those patients with: Anaemia, Diabetes, Frailty, Day case surgery, New Atrial Fibrillation, Prehabilitation • Training for staff (above mandatory) in: Pre-operative testing guidance, ASA grading (or low, medium and high risk), objective risk prediction using either condition specific or generic tools such as the Surgical Outcome Risk Tool (sortsurgery.com), ECG recognition, understanding blood results, echo indication and review, understanding cardio-respiratory disease, CPeT (where indicated), anticoagulation management, lifestyle modification	• Screening and Optimisation Pathway once patient added to waiting list for surgery • POA before TCI date for non-urgent surgery to inform scheduling • Appropriate triage to low, medium and high risk clinics dependant on patients health history/needs supported with an appropriate review process by the clinical teams • Digital support to enable streamlined pathways where feasible • Alignment of POA validation timeframe based on patient co-morbidity/risk/specific patient needs • Clear lines of communication between POA and other essential areas in the surgical pathway • Feedback to staff on the success or improvement opportunities of the POA process

1 Staffing

The optimal staffing structure for POA will vary across England, depending on local factors including: service offers, regional population, surgery type and risk level, staff responsibilities, job descriptions and competencies.

The staffing structure suggested in this guidance is based on the findings of a survey of non-medical POA leads and a benchmarking survey on POA services is currently being undertaken by the national team.

1.1 Leadership

Explanation of 'Clinical but non-medical leadership' or 'POA Lead' role:

References to the **'POA Lead'** in this document should be understood as referring to the **clinical but non-medical leadership role within the POA service**.

Those taking this role could include: Matrons, nurses, Operating Department Practitioners and other registered healthcare professionals who are clinical but not medical. This role is **in addition** to the medical and operational leadership.

The POA Lead role may be solely dedicated to POA, or this role could be held by someone with oversight of other services within the Perioperative Directorate, such as theatres of day case surgery.

Terms used in this guide:

Registered Healthcare Professional – RHCP (Band 5 and above) Registered Nurse, Operating Department Practitioner, Allied Health Professionals and Pharmacist

Other Health Professional working within POA (Band 3-4) Assistant Practitioner, Nursing Associate, Health Care Assistant all of whom are *accountable to a registered Health Professional and where there is implemented safety netting for any patients who fall outside of protocol*

Senior Nurse/AHP/ Pharmacist (Band 6, 7, 8a) Specialist Practitioner, Nurse Specialist, Advanced Practitioners, Anaesthetic Associates, Physician Associates, Nurse Consultant with specialist skills in Clinical Decision Making

The POA Lead (Clinical but not medical lead)

The POA Lead should have a clear understanding of capacity and demand for theatres and scheduling. They should seek to reduce the number of anaesthetic referrals by optimising the use of staff skills and capacity in the POA service.

Those undertaking the POA Lead role could include:

- Matron
- Non-medical Lead
- Lead nurse/ Allied Health Professional (AHP)/ Operating Department Practitioner (ODP) or other Registered Heath Care Professional (RHCP)
- Nurse Consultant (although often without staff management responsibility)
- Advanced Clinical or Nurse Practitioners (ACP / ANP)

The POA Lead should have advanced knowledge and capability in POA, as well as an understanding of:

- Service development
- Staffing structure
- Training and education for POA staff, including competency frameworks and implementing policies and guidelines
- In some areas, advanced assessment of complex patients including ordering of 'above' routine investigations, interpretation of investigations, shared decision making and primary and secondary care referrals

Establishing the baseline

Operational management need to understand their POA service. This requires regular service reviews which should include:

- The number of monthly referrals to POA, including new and 'expired referrals' per surgical directorate
- Calculations for anticipated demand:
    - The number of referrals in total
    - The number and proportion of referrals expected to have a POA
    - The number of patients being seen in outpatient clinics where surgery is considered
    - The proportion and number of patients in outpatient clinics expected to convert to surgical waiting lists both intended day care and in patient stay
    - Capacity needed on each day to allow lead in time and to meet demand
    - The number of referrals for anaesthetic review clinic (both F2F and notes review) including the reason for review to help identify training needs
- Plans for capacity, based on the following aims:
    - Scheduling POA for at least 6 weeks before the planned date for elective surgery
    - Maximising one-stop visits for patients, where appropriate
- The proportion of available slots being used and DNA rates
- Timing of the POA activities using a 'Time and Motion' study of all the expected tasks that need to be completed. This should include the preparation and administration time around each staff member's caseload and ways for administrative and clerical to support this process.
- Adherence to recommended POA tests and diagnostics (review of all guidance and protocols)

1.2 Staffing your clinics with the right staffing ratio

Matching capacity to demand for POA can be difficult, as the total number of appointments and attendances may not match the total number of patients. An individual patient may need multiple POA episodes or points of contact, depending on local processes, especially for high-risk surgery or monitoring pathways. These requirements need to be factored into the number of appointments scheduled.

Questions to assess your service

- ✓ How many patients who have remote POA (telephone/ digital) need to come back for preoperative testing?
- ✓ How many POA appointments have a consultant anaesthetic review?
- ✓ How many patients require some form of further investigation, for example CPeT/ IV iron/ ECHO?
- ✓ How many patients fit a low-risk pathway? Could this be done by embedding an HCA pathway into your process?

1.3 Timing for Assessments

The time planned for POA assessments must be sufficient for both the clinical time with the patient and additional time spent on investigations, follow up and personalised care plans. Considerations for the timing of assessments in your service may include:

- The risk profile of the codemix, i.e. low, medium or high risk
- The clinical team's expectations about the scope of their review and actions they may need to take, for example, blood tests, ECGs, further testing and referrals to primary care
- The percentage of patients who will be seen in RHCP-led clinics
- The separation of clinical and non-clinical work and which staff are responsible, based on professional registrations and competencies

1.4 Validation and Expiry Times of POA

Validation and expiry times vary across POA services nationally. A recent survey of 34 POA Leads across England found that reported times for expiry varied between 12 weeks and 6 months. The reported causes of this included dependencies on MRSA screening, preoperative investigations and low and high risk pathways. The survey found that in most trusts, expiry times were not related to surgical procedure or patient risk. The survey also found that the majority of trusts did not keep in touch with patients whilst they waited for the procedure and instead relied on the patient to inform them of changes, and that this had led to cancellations and postponements close to surgery or on the day.

It is recommended to keep in touch with patients for purposes of re-assessment, and this does not necessarily require any further face-to-face appointments. This contact with patients should be factored into POA pathways, with a robust method of communication into the theatre and scheduling teams.

Questions to assess your service

- ✓ How long is the time for assessment for your POA appointments?
- ✓ Does each appointment last the same length of time?
- ✓ Could appointment times be better adjusted to fit patients' needs and risk levels?
- ✓ Is there an opportunity for telephone follow up as a means of keeping in touch?
- ✓ Are there direct links/visual boards of pending and fit to go patients that can feed back into your scheduling teams?
- ✓ Is there a mechanism for review of POA patients who have expired (shorter appointments)?
- ✓ Can MRSA pathways be revisited in relation to validity?

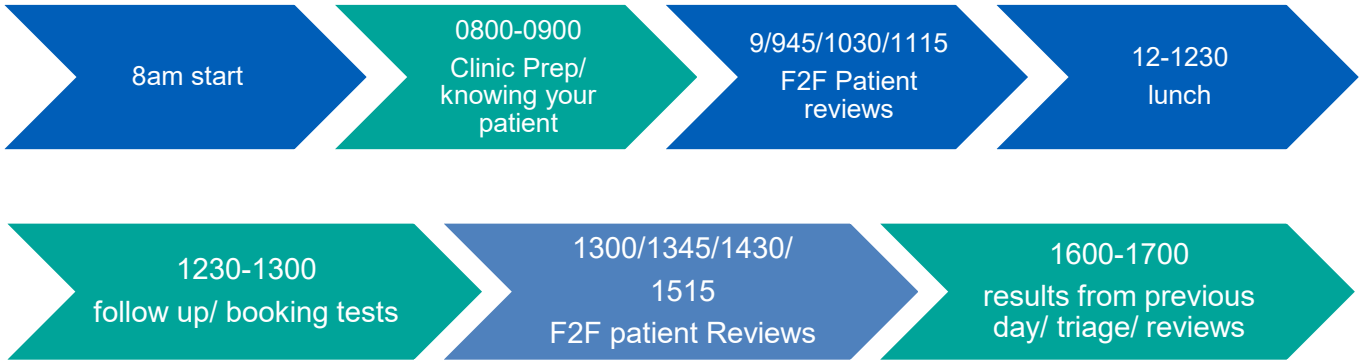
Example: Time for assessment

A staff nurse sees seven patients per day who have been graded as **moderate to high risk (see matrix on page 21)**. The clinical time and investigations take 40 minutes, but each patient has bloods and ECGs which need checking. Following review, 1 patient has diabetes and needs medication advice/ insulin regime, 1 patient is on antiplatelet medication which needs to be coordinated with pharmacy, 2 patients have an abnormal ECG (new LBBB) and require an ECHO, and 1 patient has tested positive for MRSA and needs a script for eradication.

Work plans for RHCP or support staff must factor in time for necessary administration, such as steps to address the clinical issues in the above example. Admin time should be given per patient, and dependant on the caseload mix. Non-clinical roles can support with this, but some of these tasks will remain the responsibility of the RHCP or support staff and some level of caseload autonomy is important for learning and development.

Providers should use both, time-in-motion studies for the type of assessment required and incorporate administration time for caseload per RHCP with the available resources in place.

The diagram below shows a typical day of face-to-face patient reviews for a RHCP:



Note on highlighted process steps: Admin time is key to prevent bottleneck in systems

1.5 Working out staffing - Capacity equations

The number of staff needed for the POA service is calculated based on the expected demand and activity per day, with an uplift to factor in annual leave and absence (0.2WTE)

$$\frac{\textbf{Number of POA episodes per year}}{\textbf{Number of patients seen per day}} = \textbf{Number of clinical days per year}$$

$$\frac{\textbf{Number of clinical days per year}}{\textbf{52 weeks}} = \textbf{Number of clinics per week}$$

$$\frac{\textbf{Number of clinics per week}}{\textbf{Number of days worked per week}} \times \textbf{1.2 to adjust for WTE} = \textbf{Staff needed}$$

Example 1: RHCP face-to-face preoperative assessment appointment

Surgeon X operates on 300 patients per year and is new to the trust. The caseload is a mixture of both intermediate and high risk surgical procedures. There is no optimisation service at present, therefore each patient will be required to have a GA and will need a F2F POA appointment.

Each RHCP currently sees seven patients per day in 45 minute slots (based on a five day week at 7.5 hours per day 830-430pm) but needs admin time of 15 minutes per patient. Slots at 9:00/9:45/10:30/11:15/13:30/14:15/15:00 would give 2 hours 15 minutes of admin time within the day and excluding 30 minutes lunch.

$$\frac{300\ POA\ episodes\ per\ year}{7\ patients\ seen\ per\ day} = 43\ clinical\ days\ per\ year$$

$$\frac{43\ clinical\ days\ per\ year}{52\ weeks\ of\ the\ year} = 0.8\ clinics\ per\ week$$

$$\frac{0.8\ clinics\ per\ week}{5\ days\ worked\ per\ week} \times 1.2\ to\ adjust\ for\ WTE = \ 0.19\ WTE\ staff\ needed$$

0.19 WTE staff are needed.

Example 2: RHCP MSK clinic

The MSK directorate sees 2500 patient per year for surgery but there is only 1 RHCP running this clinic, who sees nine patients/day for 4 long-days per week. The wait for an appointment is now 6 weeks. More workforce will be needed to avoid further increases to waits for POA if there are no alternative pathways available for remote/initial assessment.

$$\frac{2500\ episodes\ per\ year}{9\ patients\ seen\ per\ day} = 278\ clinical\ days\ per\ year$$

$$\frac{278\ clinical\ days}{52\ weeks\ of\ the\ year} = 5.3\ clinics\ per\ week$$

$$\frac{5.3\ clinics\ per\ week}{4\ days\ worked\ per\ week} \times 1.2\ to\ adjust\ for\ WTE = 1.6\ WTE$$

$$Total\ 1.6\ WTE\ needed - 1\ WTE\ RHCP\ already\ in\ post\ = 0.6\ WTE\ needed\ in\ addition$$

An extra 0.6 WTE staff are needed to meet the demand.

Remember that this is just clinical time with patient. Depending on case-mix, and the presence of an optimisation pathway, you may need to add in admin time.

Example 3: HCA investigations clinic

50% of 28,000 patients per year need pre-op investigation (bloods, ECG, etc)

14,000 need to come to an investigation clinic per year

Each HCA can see 15 patients per day over 5 days, based on a 7.5 hour working day

$$\frac{14{,}000\ episodes\ per\ year}{15\ patients\ seen\ per\ day} = 933\ clinical\ days\ per\ year$$

$$\frac{933\ clinical\ days\ per\ year}{52\ weeks\ per\ year} = 18\ clinics\ per\ week$$

$$\frac{18\ clinics\ per\ week}{5\ days\ worked\ per\ week} \times 1.2\ to\ adjust\ for\ WTE\ = 4.3\ WTE\ HCAs$$

4.3 WTE HCAs are needed.

Example 4: Telephone Clinic for low risk procedures or patients who have expired POA status

There are 3,000 expired POA within the trust system and you are asked how much resource this will take to clear in 6 months

Staff can do 15 telephone assessment updates/day between 09:00 and 16:30 at 20 minutes each, factoring in some admin time.

$$\frac{3{,}000\ episodes\ per\ year}{15\ telephone\ assessments\ per\ day} = 200\ clinical\ days\ per\ year$$

$$\frac{200\ clinical\ days\ per\ year}{52\ weeks\ per\ year}\ = 3.84\ clinics\ per\ week$$

$$\frac{3.84\ clinics\ per\ week}{5\ days\ worked\ per\ week} \times 1.2\ to\ adjust\ for\ WTE\ = 0.9\ WTE$$

$Double\ staffing\ in\ order\ to\ complete\ a\ year\ of\ work\ in\ six\ months.$

$0.9\ WTE \times 2\ = 1.8\ WTE$

1.8 WTE staff are needed to clear the 3,000 expired POA within the trust system.

1.6 Specialist POA staff

Specialist POA staff normally have extended or enhanced skills delivering specialised care to a more complex patient population. Banding and job titles vary, dependent on skill and professional qualifications, but generally include:

- Nurse Consultants
- Clinical Nurse Specialists (CNS)
- Advanced Nurse Practitioner (ANPs)
- Advanced Clinical Practitioners (ACPs)
- Anaesthetic Associates (AAs)
- Operating Department Practitioners (ODPs)
- Allied Health Professionals (AHPs)
- Pharmacists
- Middle grade Doctors
- Health visitors
- Specialists in public and population health

Advanced Roles can incorporate:

- Cardiopulmonary exercise testing (CPeT)
- Pre-operative Testing **above** routine testing
- Investigations review and Interpretation (i.e. ECGs and Echos)
- Targeted Clinical Examination
- Non-Medical Prescribing (NMP)
- Services complimenting POA (IV iron/Prehabilitation /Enhanced Recovery pathways)
- Review of Complex patients/ notes
- Clinical Triage from referrals or from digital platforms
- Comprehensive Geriatric Assessment (CGA)
- Shared decision making

Staff examples

'*My name is Chris and I'm an ODP by background. I'm a band 6. My job is to complete CPeT testing for patients who are referred into the service. This is an autonomous role and I use a set clinical protocol for who I can test. I have completed an accredited CPeT course and have been supervised for 25 tests to ensure my competency. I see 6 patients per day in hourly slots and then summarise the findings for Consultant review.*'

'*My name is Rachel. I'm a Clinical Nurse Specialist in POA. My role is to assess patients but I also have my non-medical prescribing qualification so I can support the team with prescriptions for things such as IV iron or bridging for anticoagulation. I also review the investigations from the junior team and help support their clinical decision making.'*

1.7 Reviews of higher risk patients

In some trusts, senior staff complete their own reviews of higher risk patients. In others, specialist POA staff review around 20% of all notes from the POA team through a senior RHCP led clinic to achieve an 80% nurse led model.

Example: Review of higher risk patients

In a population of 28,000 patients per year, around **5,600 patients** would be reviewed.

Each review takes around 20 minutes and your nurse can do 20 reviews per day, working 4 days per week.

$$\frac{5{,}600\ patients\ to\ be\ reviewed}{20\ reviews\ per\ day\ per\ nurse} = 280\ clinics\ per\ year$$

$$\frac{280\ clinics\ per\ year}{52\ weeks\ per\ year} = 5.4\ clinics\ per\ week$$

$$\frac{5.4\ clinics\ per\ week}{4\ days\ worked\ per\ week} \times 1.2 = 1.6\ WTE$$

1.6 WTE nurses are needed for reviews.

Band 4/5 Staff

Band 4/5 staff may be experienced staff or new to the role. They can often be

- ODPs
- Staff Nurses/ ODPS/ AHPs/ other RHCP
- Nursing Associates (NAs)
- Assistant Practitioners (APs)

Other staff working within POA

Other staff who work in POA, who support the RHCP practice, may include:

- Perioperative Care Coordinator (clinical or non-clinical)
- Health Care Assistants / Clinical Support Workers
- Student Nurses/ ODPs
- Administrative and Clerical Staff (A&C)

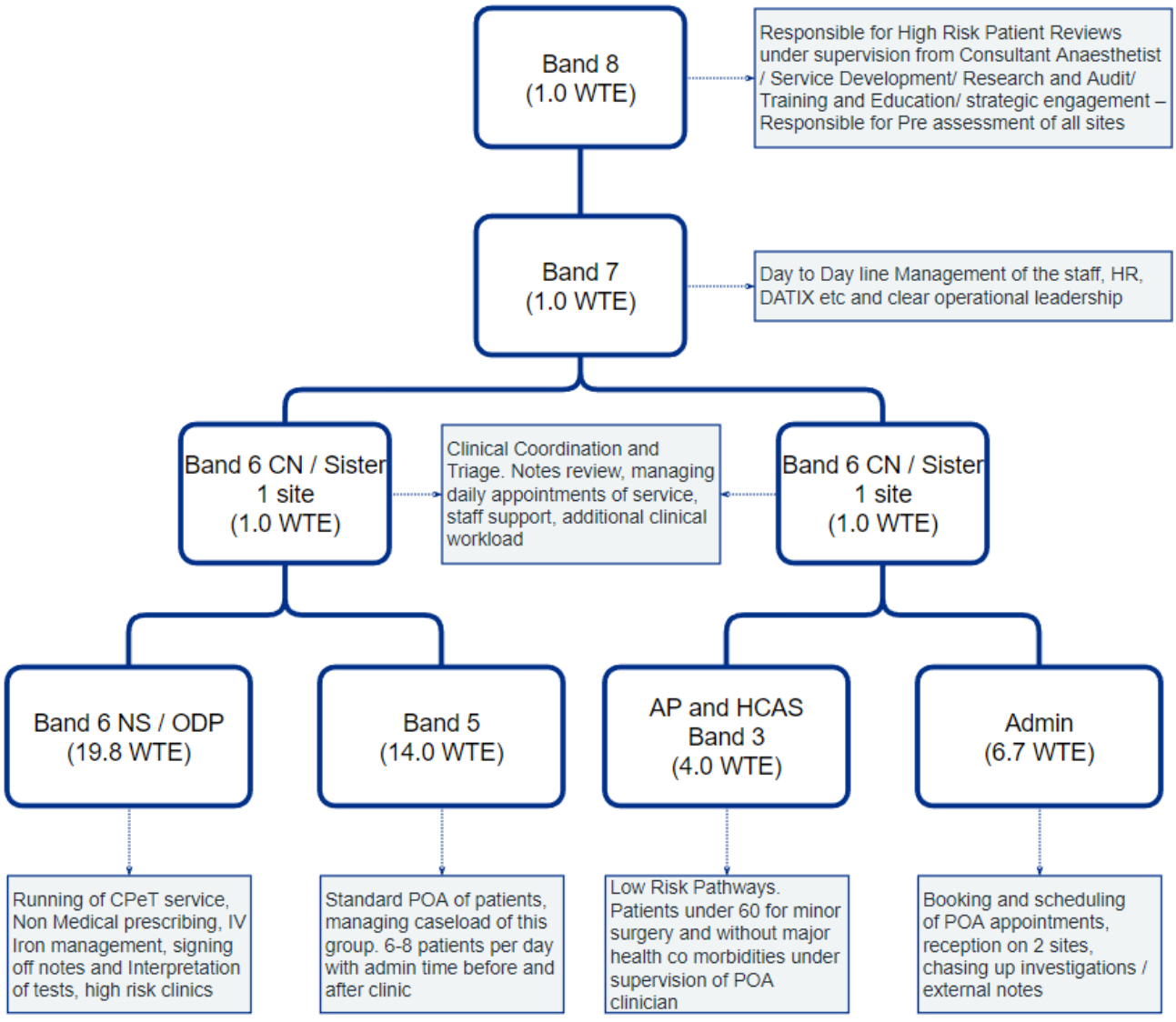
These roles assist POA practice in:

- Clinical Investigations Clinics
- Low Risk Pathways under a competency framework (see examples on FutureNHS)
- Booking and Scheduling
- Supporting patients with digital self-assessments
- Sourcing pre-operative investigations/testing results and appointments
- Low risk triage

1.8 Example staffing structure in an acute trust

Staffing structures will vary between trusts, depending on staffing, capabilities and knowledge. Mapping out POA is recommended (like below), as this sets out clear job roles and expectations about what each staff group deliver.

The diagram below shows an example staffing structure within one acute trust, a large tertiary referral centre with 2 main sites and a dedicated day case site. This service covers 35,000 preoperative assessment episodes.



2 Protocols and Guidance

New staff who are recruited into POA should be given a competency assessment pack to complete. They should be provided with a list of formalised protocols and guidance that are used within the area. This should include, but is not limited to:

- Over-arching guidance on preoperative assessment and optimisation: Preoperative assessment and optimisation | Guidance |Centre for Perioperative Care, Royal College of Anaesthetists, Royal College of Surgeons and others
- Indications for Pre Operative Testing Overview | Routine preoperative tests for elective surgery | Guidance | NICE
- Anaemia Guidance Anaemia in the Perioperative Pathway | Centre for Perioperative Care (cpoc.org.uk)
- Diabetes guidance Perioperative Care of People with Diabetes Undergoing Surgery | Centre for Perioperative Care (cpoc.org.uk)
- Clinical Frailty Assessment Perioperative Care of People Living with Frailty | Centre for Perioperative Care (cpoc.org.uk) & https://www.bgs.org.uk/peri-operative-care-of-older-people-undergoing-surgery
- Audit C and Smoking cessation Pathways (Localised services)
- Medication Management The Handbook of Perioperative Medicines (ukcpa-periophandbook.co.uk)
- Taking a Clinical History including recommended risk assessment tools such as STOP BANG, cardio respiratory assessment (In house or external training)
- Understanding abnormal Blood results (In house or external training)
- Understanding abnormal ECGs (In house or external training)
- Indication for Clinical Observations (Blood Pressure, weight, height, pulse, BMI, O2 saturations and pathways of referral)
- Risk Assessment (see from page 21)
- Lifestyle advice FitterBetterSooner2022web_0.pdf (rcoa.ac.uk)

There are also resources available on the FutureNHS collaboration platform workspace for pre-assessment, including specific case studies on POA best practice and a discussion forum to seek help and support. Notes of the national POA network meetings are stored in the FutureNHS workspace.

3 Process and pathways

3.1 Early screening and optimisation

Guidance on pathways for optimisation and early risk assessment once a patient is listed for surgery are available on the FutureNHS workspace:

https://future.nhs.uk/ElectiveRecovery/viewdocument?docid=149367845&done=DOCCreated1&fid=38470032

3.2 HVLC / Day case pathways

The pathways on the following pages show potential patient flow and areas where national guidance is supporting targeted work streams. These pathways are specifically designed for High Volume/Low Risk surgery (HVLC) and offer a visual representation of patient flow from surgical referral, through POA and to surgery or other management.

These pathways include 6 diagrams:

1. Preassessment pathway for elective surgery (overview)
2. Low risk elective surgery - daycase
3. Medium risk elective surgery – daycase or inpatient
4. High risk elective surgery – daycase or inpatient
5. Optimisation pathway
6. Potential electronic support for the low-risk daycase surgery pathway

Patients who are deemed high risk should not proceed to HVLC pathways of care and will need more targeted interventions.

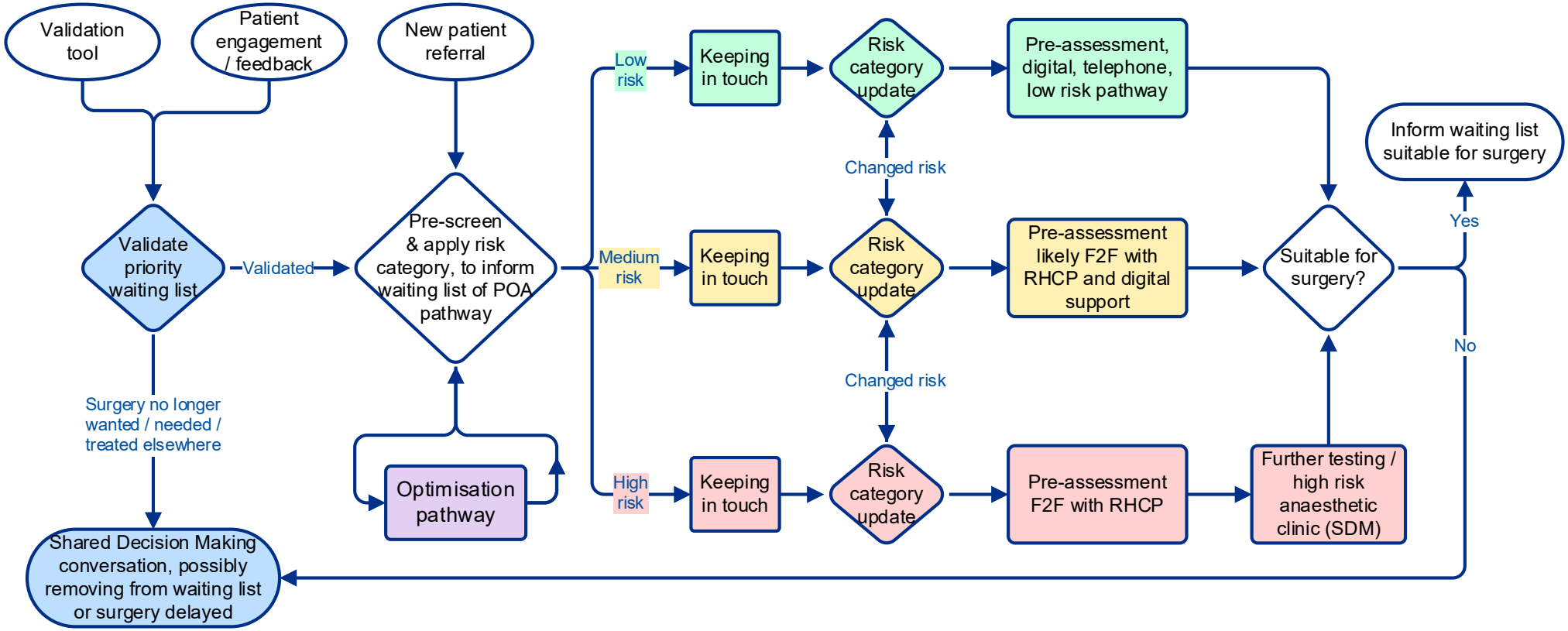
Key to pathway diagram colours

Low risk pathway	**Intermediate pathway**	**High risk pathway**
Trust level pathways	**Ongoing workstreams as part of national objectives and business planning**	**Optimisation pathways**

Pathway diagrams continue overleaf

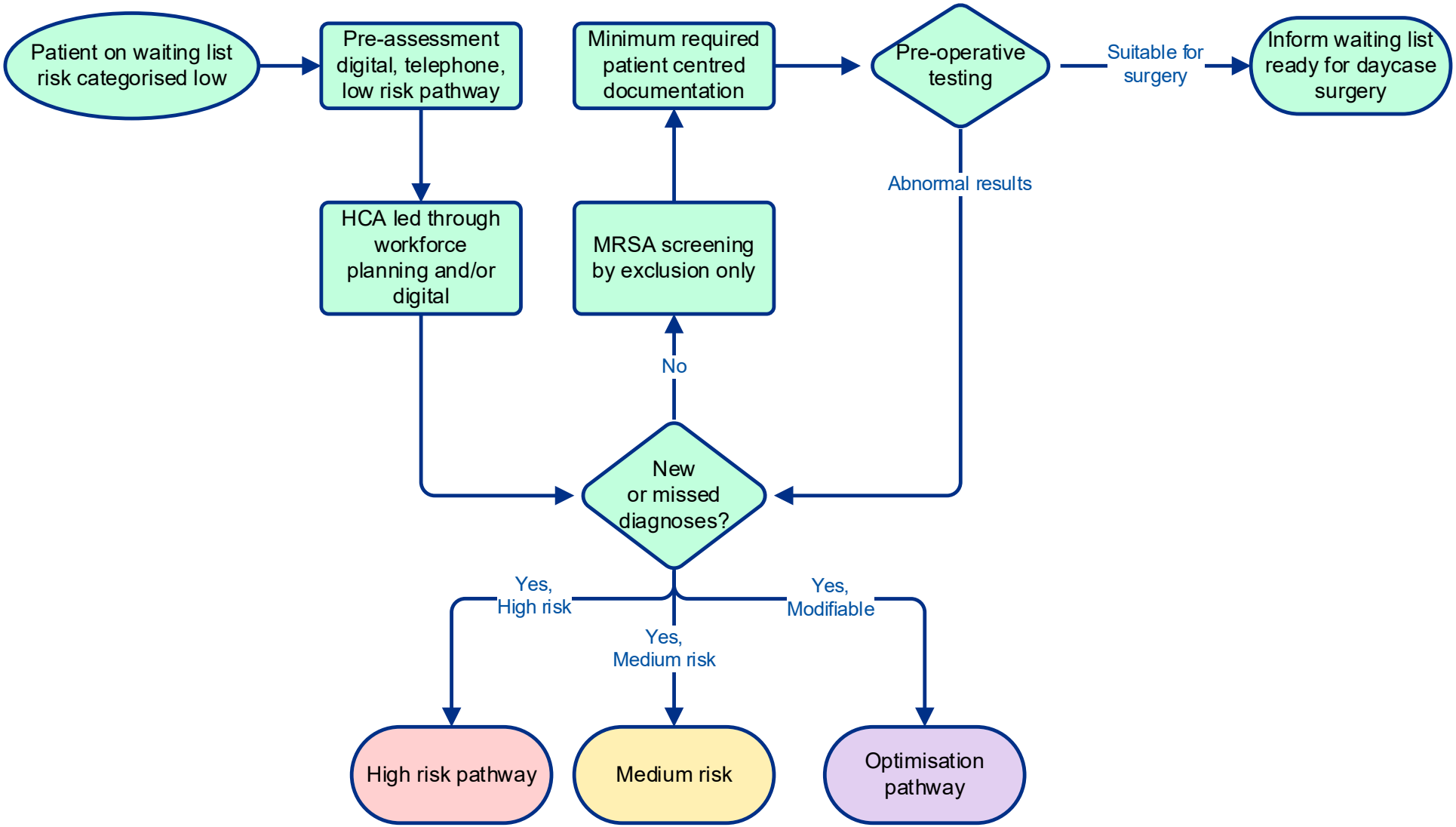
Preassessment pathway for elective surgery

All timescales (e.g. from a patient being added to the WL, through pre screening, POA and decision for surgery) will vary by provider, but understanding the waiting times and reducing duplication for both pre-operative testing and appointments are key to pathway management.



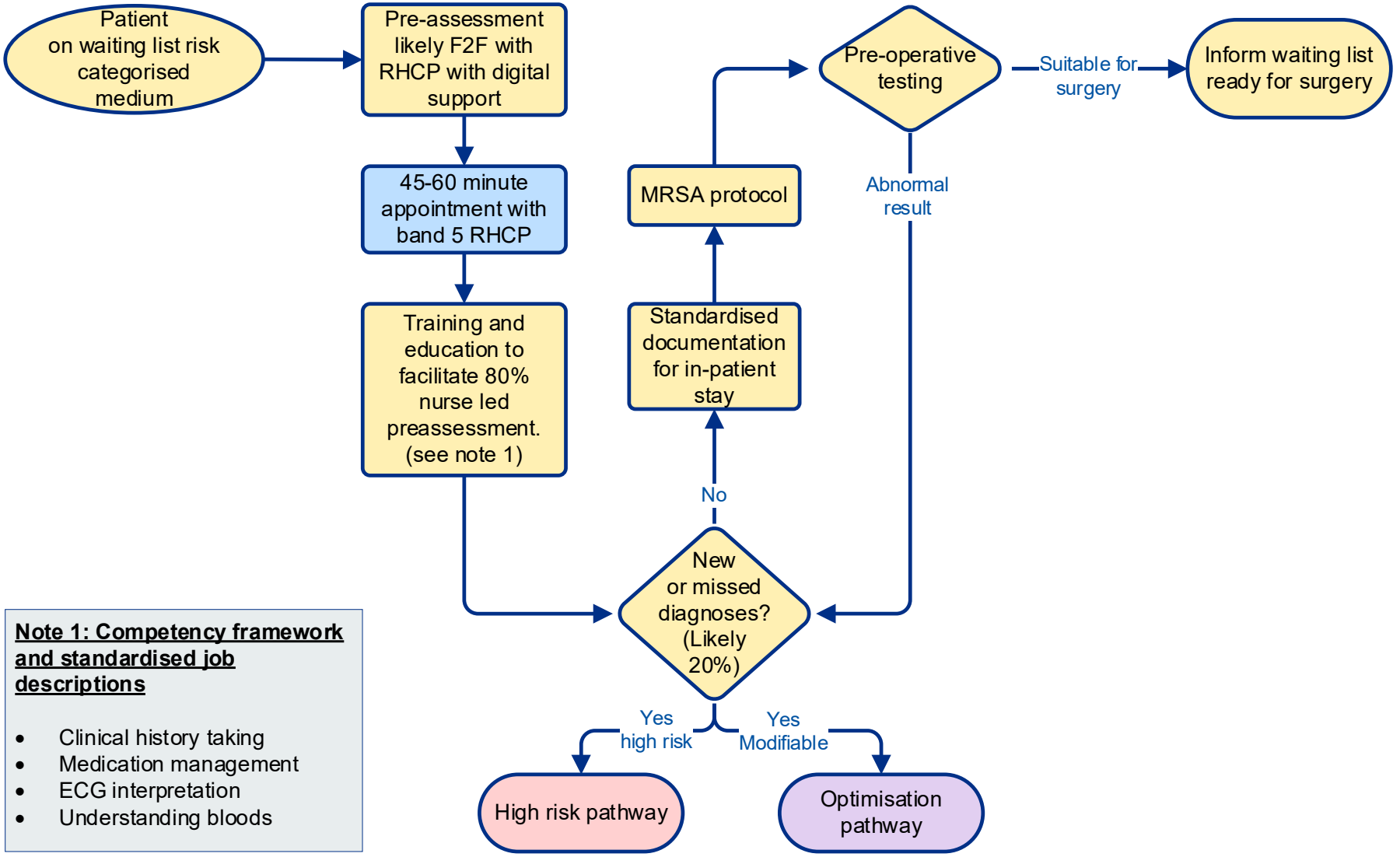
Low risk elective surgery – daycase

All timescales (e.g. from a patient being added to the WL, through pre screening, POA and decision for surgery) will vary by provider, but understanding the waiting times and reducing duplication for both pre-operative testing and appointments are key to pathway management.



Medium risk elective surgery – daycase or inpatient

All timescales (e.g. from a patient being added to the WL, through pre screening, POA and decision for surgery) will vary by provider, but understanding the waiting times and reducing duplication for both pre-operative testing and appointments are key to pathway management.

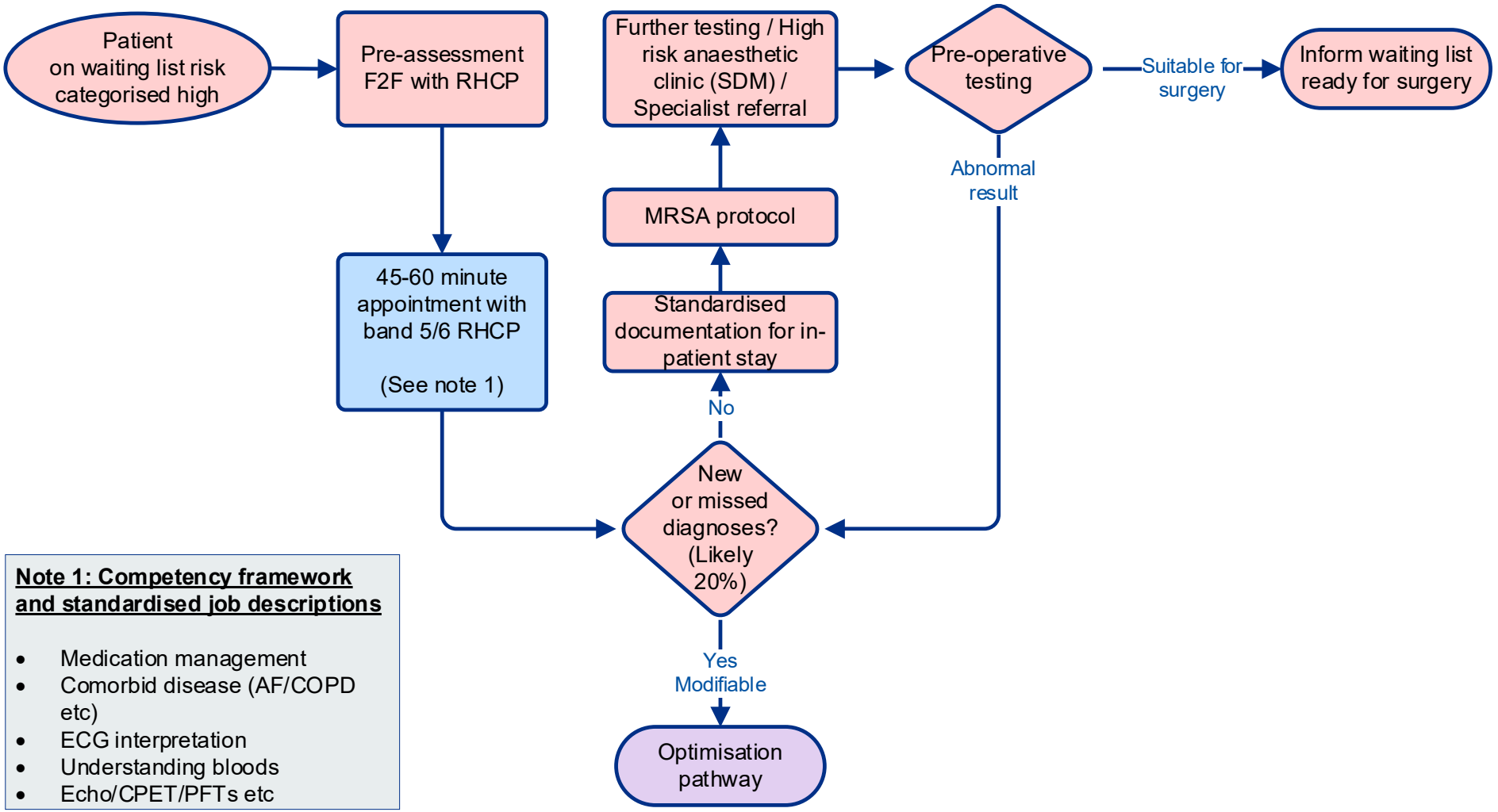


Note 1: Competency framework and standardised job descriptions

- Clinical history taking
- Medication management
- ECG interpretation
- Understanding bloods

High risk elective surgery – daycase or inpatient

All timescales (e.g. from a patient being added to the WL, through pre screening, POA and decision for surgery) will vary by provider, but understanding the waiting times and reducing duplication for both pre-operative testing and appointments are key to pathway management.

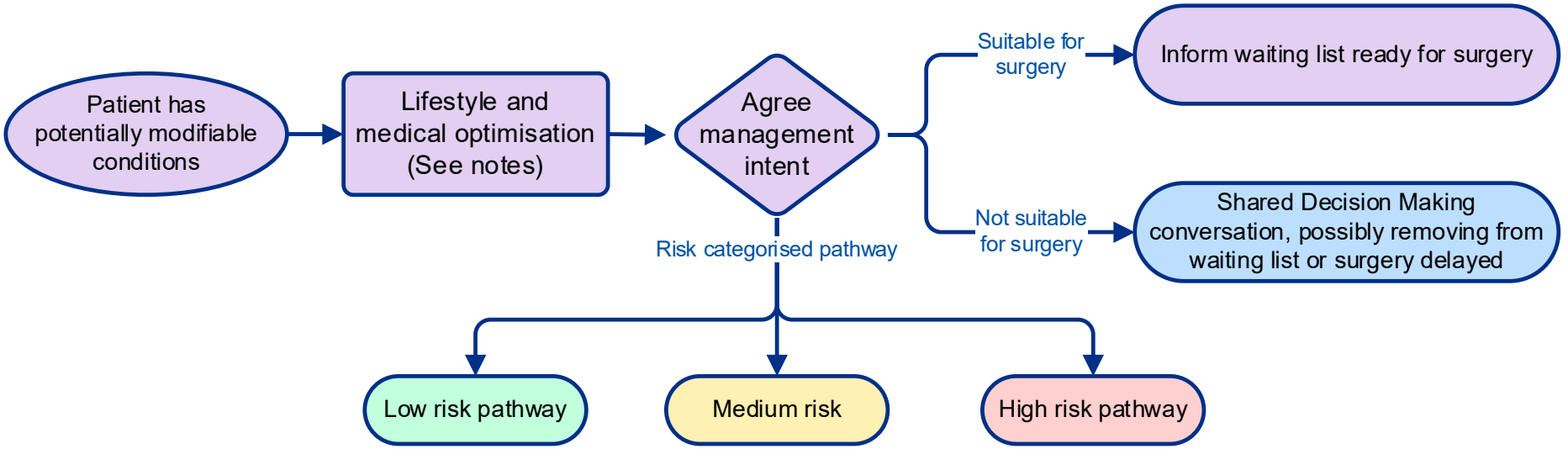


Note 1: Competency framework and standardised job descriptions

- Medication management
- Comorbid disease (AF/COPD etc)
- ECG interpretation
- Understanding bloods
- Echo/CPET/PFTs etc

Optimisation pathway

All timescales (e.g. from a patient being added to the WL, through pre screening, POA and decision for surgery) will vary by provider, but understanding the waiting times and reducing duplication for both pre-operative testing and appointments are key to pathway management.



Lifestyle optimisation

- Obesity
- Alcohol
- Smoking
- Exercise

Medical optimisation

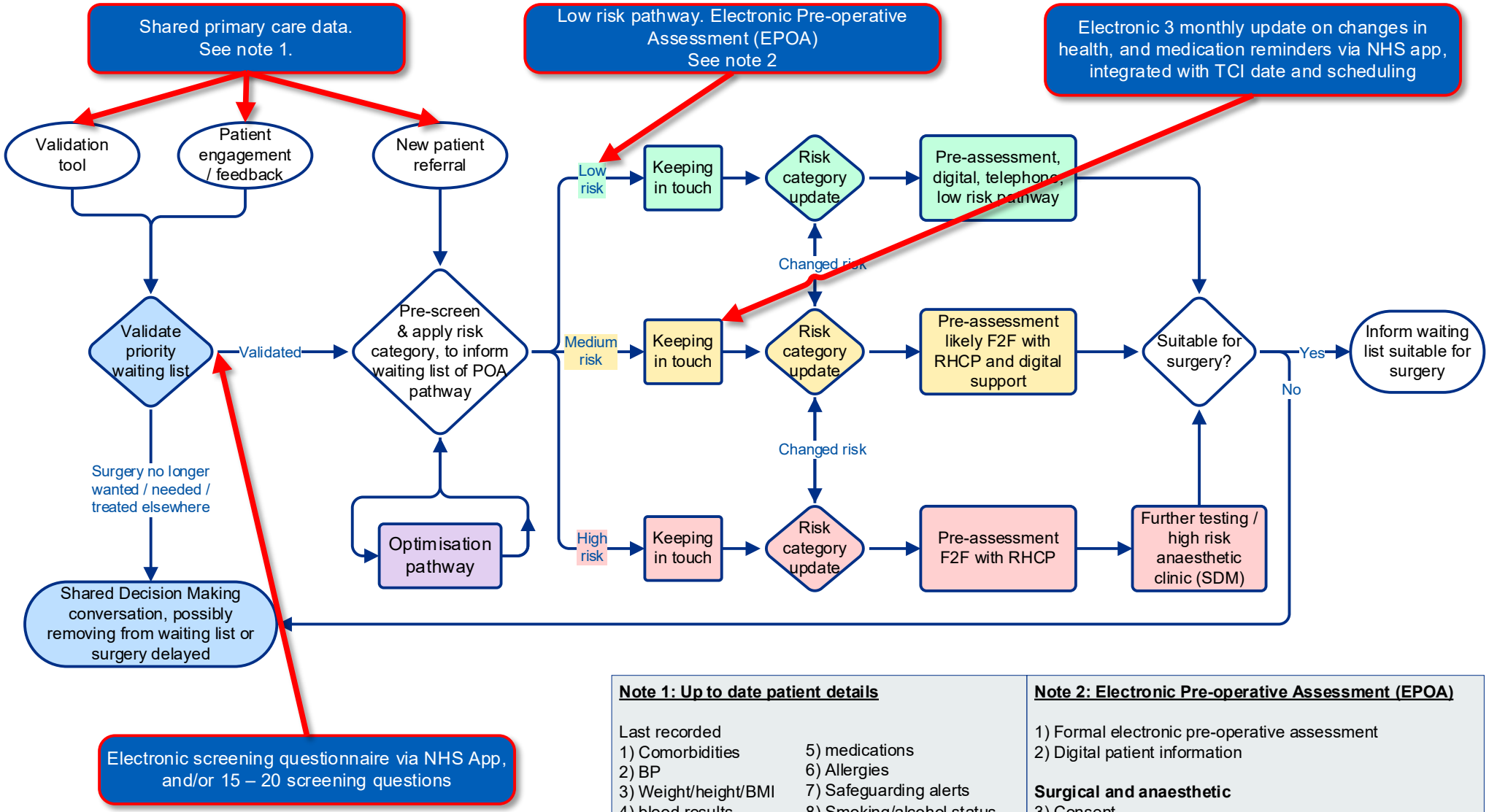
- Opioids
- Diabetes
- COPD / OSA
- Frailty
- Anaemia
- Hypertension
- Atrial fibrillation

Interventions

- Waiting well programmes
- Social prescribing
- Smoking cessation
- Weight management
- Digital apps support
- Virtual wards
- Medical optimisation
- Referral to primary or secondary care

Potential electronic support for the low-risk daycase surgery pathway

All timescales (e.g. from a patient being added to the WL, through pre screening, POA and decision for surgery) will vary by provider, but understanding the waiting times and reducing duplication for both pre-operative testing and appointments are key to pathway management.



Note 1: Up to date patient details

Last recorded

1) Comorbidities
2) BP
3) Weight/height/BMI
4) blood results
5) medications
6) Allergies
7) Safeguarding alerts
8) Smoking/alcohol status

Note 2: Electronic Pre-operative Assessment (EPOA)

1) Formal electronic pre-operative assessment
2) Digital patient information

Surgical and anaesthetic

3) Consent
4) Minimum nursing documentation ie VTE
5) Integration into trust EPR system

4 Appendices: Decision tools for patient risk grading

Decision tools for patient risk grading can support digital preoperative assessment (ePOA), self-assessment pathways, low and high-risk clinics, telephone or video assessment and face-to-face assessment. ASA Grades can be subjective when grading the co-morbid health risk of patients within Pre-Operative Assessment Clinics (POA). ASA 3 patients may include a broad range of long-term conditions and functional status, which can change a patient's triage pathway to determine what type of review is needed, particularly when also considering the type of surgery which is planned. Training can help with improving ASA grading, and use of a validated risk assessment tool is recommended to support triaging, risk assessment and shared decision making. With the help of decision tools and protocols, many patients can be triaged and optimised at Registered Health Care Professional (RHCP) level without the need to book straight into high-risk clinics.

The tools in this guide aim to help you to differentiate between patients who need review by a RHCP and those who need Consultant Anaesthetist review. There are opportunities where digital and low risk pathways can support triage decision making. These tools are provided only as an example or guideline and should be adapted to reflect localised policies.

4.1 Risk Assessment Grading Tools

Option 1: Validated risk assessment tool.

An example which is freely available and widely validated on UK patients is the Surgical Outcome Risk Tool (sortsurgery.com). The SORTv1 can be used by all staff who have been appropriately trained, particularly in ASA grading (generally more experienced RHCPs). The SORTv2, which includes clinical judgement, is recommended for use by senior decision-makers – e.g. consultant anaesthetists, surgeons or physicians with an interest in perioperative medicine.

- **Low risk: predicted 30-day mortality <0.5%**
- **Moderate risk: predicted 30-day mortality 0.5 – 1.0%**
- **High risk: predicted 30-day mortality >1.0%**

Option 2: Risk assessment matrix

Category → Risk Factor ↓	Low Risk Self-assessment / Telephone / Band 3/4 Minor < 60 minutes, minimal blood loss	Moderate Risk Registered PAC health Professional / F2F Intermediate -1-3 hours/ potential for blood loss	High Risk Senior Specialist Review and/ or Anaesthetic Consultant. Major Surgery over 3 hours with significant blood loss
Cardiac	Nil Documented BP <150/90 Normal ECG reviewed by RHCP	Stable Hypertension <160/100 Stable IHD Cardiac stenting, Controlled AF (known) Palpitations Stable heart failure with recent ECHO EF>40% Stable Valve disease with recent ECHO	History of MI cardiac and/or cardiac stenting, LV dysfunction, Pulmonary Hypertension, valve disease Pacemaker/ ICD Cardiac Transplant Uncontrolled Heart Failure Hypertension >160/100 New AF Uncontrolled AF (known) Uncontrolled Chest Pain Malignant Hypertension
Respiratory	Childhood asthma Non –Smoker/ Ex smoker STOP BANG 0-2	Any type of respiratory disease on treatment (COPD/ Asthma/ Bronchiectasis) OSA – on CPAP, STOP BANG 3-4 Smoker Recurrent Chest Infections Breathlessness	Unstable Respiratory Disease/ significant breathlessness Cystic Fibrosis OSA, no CPAP, STOP BANG > 5 Long COVID/ Recent COVID with residual symptoms
Endocrine	Hyper/hypothyroid – Result available < 1 year and normal	Controlled diabetes – HBA1C <69 Abnormal Thyroid Result	Unstable Diabetes HBA1C >69, Pituitary Surgery, Addison's Disease
Liver	None	NAFLD, cirrhosis, stable	Active Hepatitis, Previous Liver Transplant
BMI	18<30	31-39	>40 or <18
Haematology	None	Anaemia Expected abnormal blood screen in relation to surgery	Haemophilia, factor V Leiden, sickle cell anaemia, Low plts <100, unexpected abnormal LFTs, Unexpected abnormal clotting, Significant anaemia, Active Hepaptis/HIV
Frailty	CFS 1-2	CFS 3-5	CFS>6
Renal	None	CKD 3-4 or eGFR >30 UTI	CKD >4 , ESRD, Dialysis, worsening eGFR
Neurology	None	Stable neurological disease (Epilepsy, MS), controlled with medication and regular review Well controlled pain with minimal opioid use Recent Memory loss/mild cognitive impairment TIA, CVA > 12 months	Unstable Epilespy, regular seizures, Parkinsons, Ehlers danlos Syndrome, dementia Chronic Pain on high dose opioids/ Gapapentinoids Unexplained faints/ blackouts CVA, TIA (all <1 year),
VTE	No history/ low risk on assessment	Previous DVT/ PE High Risk on VTE assessment	Recent DVT/PE <3 months

Category → Risk Factor ↓	Low Risk Self-assessment / Telephone / Band 3/4 Minor < 60 minutes, minimal blood loss	Moderate Risk Registered PAC health Professional / F2F Intermediate -1-3 hours/ potential for blood loss	High Risk Senior Specialist Review and/ or Anaesthetic Consultant. Major Surgery over 3 hours with significant blood loss
Medication	OCP/ HRT/Thyroxine/ Simple analgesics (paracetamol/ Ibuprofen)	Anticoagulation/ Antiplatelet therapy Medications for diabetes including Insulin DMARDs Herbal Medications Any medication that requires stopping pre operatively	Any other high risk medications for review including those who are severely immunocomprised/steroid dependant
GA Risk	None	Previous problems with GA (allergies, intubation, concern as never had one) Family History of significant Cardiac disease	Difficult Intubation Malignant Hyperthermia Anaphylaxis during previous GA Request to see anaesthetist
Rheumatoid Disease	None	Mild disease	Severe disease
METS score	No limitations to exercise – METS >8	Some restrictions to activity METS 4-7	METS <4
Alcohol	AUDIT C <4	AUDIT C 5-7	AUDIT C >8 Or Alcohol dependant
Social	None identified	Support of carer, carer for someone else, lives alone/ concerns about discharge	Significant concerns of managing post-surgery
Support	None	Accessibility or support highlighted in terms of learning difficulties, learning disabilities, educational or mental health needs where a care plan may be needed.	Significant concerns / significant anxiety in relation to anaesthesia/ surgery
Infection	None	Previous MRSA/ MSSA/ C-Diff/CPE infection	Previous Sepsis requiring admission

Example 1: Patient X aged 70 years, has been listed for an arthroscopy

They completed the initial optimisation screening questionnaire and have been identified as anaemic, smoker, hypertensive on medication (157/89) and restricted by hip pain which has reduced activity score to 4 METS.

Their SORT 30-day mortality prediction based on their initial screening questionnaire is: 0.56%

This patient should be in the **intermediate** risk category and should follow the intermediate pathway of care

Example 2: Patient Y aged 70 years, has been listed for Total Hip Replacement

They have been through initial screening and have been identified as having a BMI of 42, diabetes (HBA1C 72) and significant breathlessness at rest.

Their SORT 30-day mortality prediction based on their initial screening questionnaire is: 2.15%

This patient should be in the **high** risk category and offered optimisation where possible.

4.2 Decision Tools to support preoperative testing and triage

4.2.1 Indications for Preoperative Testing for consideration

Table 1: Special patient circumstances (all operations)	Requirements
Abnormal bleeding/ Bruising Easily	FBC, coagulation
Age >65	ECG
Alcohol excess (>30 units/week)	FBC, LFTs
Anaemia	FBC with potential for iron studies if required
Atrial fibrillation (new or uncontrolled)	TSH, ECG
Chest pain	ECG
Diabetes	U&E, HbA1c (if non in last 3 months) ECG
Heart disease	ECG
Hypertension	U&E, ECG
Kidney disease	U&E, ECG
Liver disease (acute or chronic)	Coagulation, LFTs
Palpitations	ECG, TFTs
Unexplained shortness of breath or light headedness	ECG, FBC

4.2.2 OLDCART TOOL for prompt question in relation to cardio-respiratory history

Onset	When did it start?
Location	Where is it?
Duration	How long have you had it?
Character	What is it like?
Aggravating factors	What makes it worse?
Relieving factors	What makes it better?
Treatment	Are you on treatment?

4.2.3 Indications for Electrocardiography (ECG) in POA

- Age >65
- Hypertension
- BMI >40
- Murmur
- Strong family history of cardiac disease
- Diabetes
- IHD / CAD / previous cardiac surgery
    - Chest pain / cardiac sounding
- Epilepsy
- Illicit drug use
- Thyroxine / thyroid problems
- Heavy smoker

4.2.4 Echocardiography (ECHO) – Example

Indicated:

- New signs or symptoms of cardiac failure: Shortness of breath (exercise tolerance < 5 METS), orthopnoea, paroxysmal nocturnal dyspnoea , bilateral ankle oedema/ sacral oedema
- Known cardiac failure and recent significant worsening of symptoms
- Known heart murmur, valve abnormality, prosthetic valve with recent significant worsening of symptoms (shortness of breath on exertion, orthopnoea, Paroxysmal nocturnal dyspnoea, cardiac chest pain) or abnormal ECG
- Known valve abnormality or pulmonary hypertension under echo surveillance who are due next routine echo
- New arrhythmia: AF, LBBB, Q-waves (or other major ECG change ST changes)
- Exertional syncope (not previously investigated)
- Abnormal CPEX (if available)- may be indicated, discuss with senior nurse or consultant

Not indicated:

- Routine pre-operative testing
- Inability to perform CPET testing (if available) with none of the above criteria
- Repeat assessment of LV function or valves with no change in clinical status
- Known heart murmur with normal ECG and no symptoms
- Longstanding AF and previous normal Echo

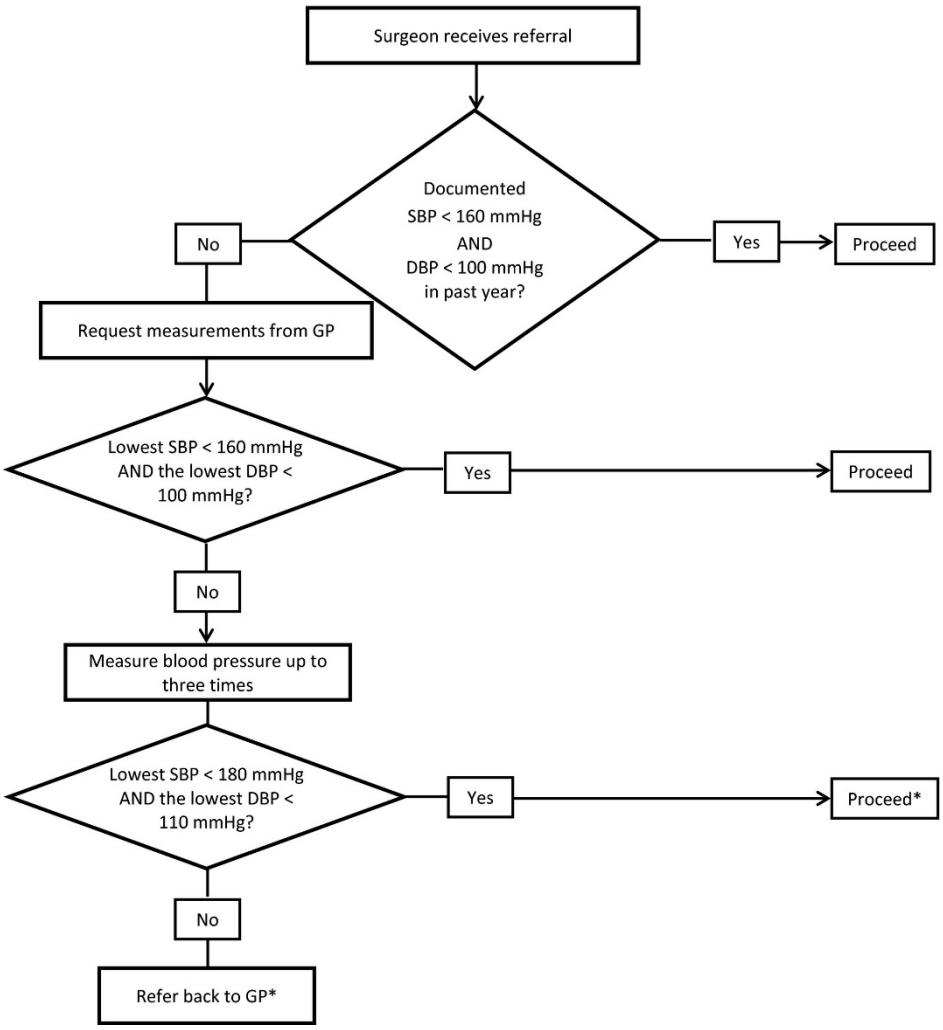
References:

National Institute for Health and Care Excellence (2016): *Routine preoperative tests for elective surgery* (NICE guideline 45)

British Society for Echocardiography: *Clinical Indications for Echocardiography*

European Society of Cardiology / European society of Anaesthesiology (2014): *Guidelines on non-cardiac surgery: cardiovascular assessment and management*

4.2.5 Blood Pressure Guidance



[The measurement of adult blood pressure and management of hypertension before elective surgery - Hartle - 2016 - Anaesthesia - Wiley Online Library]

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