Centre for Sustainable Delivery

NHS SCOTLAND

Scheduling Principles

A Framework for Perioperative Services in Scotland

Background

The Perioperative Delivery Group (PDG) was established in November 2023 to ensure a national approach to:

- Maximising flow through perioperative services
- Maximising productive time in theatres
- Reducing the time patients wait for perioperative services

To help realise these aims, several Task and Finish Groups were set up to focus on key actions to realise the overall ambitions of the PDG. The Scheduling Task and Finish Group was established to review current scheduling processes and practices and make recommendations for further improvement.

Remit

Through stakeholder engagement and drawing on the expertise of its members, the group aimed to identify current scheduling processes and behaviours within health Boards and recommend improvements that would:

- Optimise theatre capacity.
- Maximise performance.
- Minimise delays, reduce cancellations, particularly “on the day” cancellations and fallow theatre sessions.
- Enhance the patient and staff experience.

Focus areas of included:

- Developing a centralised approach to scheduling.
- Adopting 6-4-2-1-0 planning principles.
- Pooling patient lists.
- Standby lists.
- Utilising flexible session capacity.
- Back-filling lists.

Core principles

Principle 1 – Develop a Centralised Approach to Scheduling

Effective Scheduling Service

• Waiting list validation should be undertaken regularly to ensure ongoing management of the Inpatient (IP) and Day Case (DC) lists.
• Patients should not receive a To Come In (TCI) date until pre-assessment is complete.
• Patients should have confidence that when they are offered a TCI date their procedure will proceed as scheduled, except in exceptional circumstances.
• Communication with patients should be timely, appropriate (e.g. via letter or digital means) and include all relevant information for their surgery.
• Patients should have a clear point of contact if they have any concerns in relation to their surgery. For example:
  • Periods of unavailability.
  • If their symptoms get worse.
  • If they are unable TCI.
  • If they no longer want to proceed with their surgery, and the patient is assured that this information is acted upon.
• A clear process should be in place for patients to confirm their TCI date, including what will happen if the patient does not respond.
• Patients should be advised of what happens if they decline their TCI date.
• Patients are given information and are sign posted to information for appropriate health and wellbeing or prehabilitation advice before their surgery depending on the specific health Board's process.
• Scheduling teams must be aware of patients' home location and Board. This is particularly relevant if surgery is being planned outside of their local area or at a National Treatment Centre (NTC).
• Where available, patients should be offered a patient navigator to support them through their surgical journey.
• Scheduling teams should hold daily huddles to enhance team communication, improve workflow efficiency and proactively address potential issues.

List Scheduling

- Pre-operative assessment should be scheduled to minimise the need for repeat assessments.
- There should be a minimum of 12 weeks for routine patients from the point of referral to pre-assessment, which would then give time for patients to have their health conditions optimised prior to surgery.
- Scheduling teams must be informed of patient pre-operative assessment dates to ensure a TCI date is not assigned before pre-assessment is complete.
- Scheduling teams should be aware of the length of time for validity of pre-assessment tests.
- A clear communication process should be in place for any changes to theatre availability, for example, if a clinician needs to cancel or release a session.
- Scheduling teams should be notified of any planned or unplanned staff leave affecting capacity.
- Scheduling teams should utilise pooled patient lists, standby lists and short notice lists.
- Where available patient-centred booking tools such as self-check-in should be offered.

Building an Elective Operating List

- Scheduling teams should be aware of local funding and modelling arrangements for each service and specialty.
- Scheduling rules should be agreed and in place between all relevant teams and specialties.
- Scheduling teams should understand the details of individual surgical procedures, including surgeon preferences and any specific requests such as anaesthetic cover.
- Scheduling forms or checklists should capture all key information, including:
    - Surgical procedure details.
    - Patient list placement requests.
    - Staffing requirements.
    - Specialist and loan equipment.
    - Any theatre-specific requirements such as microscopes, C-arms or laminar air flow.
- Scheduling teams should have knowledge of procedure types, estimated durations, and expected list positions.
- Start times for all lists should be known and adhered to.
- Scheduling teams should have visibility of staffing resources, including staffing levels and skill mix.
- Scheduling teams should ensure a balance between complex and less complex procedures on the same list.
- Scheduling teams should ensure list ordering considers patient specifics, clinical and operational priority, availability of staffing, equipment, and decontamination turnaround times.
- Scheduling teams should be aware of the number of available High Dependency Unit (HDU), Critical Care Unit (CCU) and Enhanced care beds.

Using Data for Improvement
• A culture of continuous improvement should be supported and encouraged. • All data should be regularly updated, ideally in real time, to enable regular and accurate data reporting. • Key performance indicators (KPIs) should be reviewed routinely. • Teams should receive regular feedback on performance to support improvement.

Principle 2 – Adopting 6-4-2-1-0

General Overview
• Adopt digital scheduling systems. • Identify a senior responsible lead or arbitrator. • Establish weekly multi-professional scheduling meetings. • Ensure joint responsibility for scheduling between theatres and specialities. • Implement an escalation process to avoid missed utilisation opportunities. • Promote corporate ownership of theatre lists, avoiding fixed surgeon-specific lists where possible. • Avoid the use of e-mail for scheduling requests. • Monitor list utilisation regularly. While there are no formal percentage targets, consider options such as no un-booked lists by Week 4. • Audit surgeon list uptake and surgical timings including anaesthetic times. • Prepare for open discussions around scheduling accuracy and list timing challenges. • Share performance data for learning and improvement.
Week 6
• Confirm annual leave for the named the surgeon and anaesthetist. • Confirm the named surgeon, named anaesthetist and named specialty. • Assess theatre staffing availability. • Offer any unallocated lists to other teams.
Week 4
• Aim to close un-booked lists or reallocate to emergency lists only by Week 4. • Finalise confirmed leave for the surgeon and the anaesthetist. • Ensure the majority of lists are allocated, allowing flexibility for urgent cases (e.g. oncology, vascular). • Offer any unallocated lists, considering lead-in times for patients, staff and equipment. • Consider offering out any unavailable lists for urgent or emergency cases. • Review Pooled Patient and Standby Lists accounting for sub-specialty specific procedures.

Week 2
• All lists should be fully booked. • Confirm TCI dates with patients (ideally this should be done at an earlier stage.) • Review list utilisation. • Agree and sign-off all theatre sessions. • Consider short notice lists using unused theatre time, particularly from services such as Ophthalmology, Plastics, LA cases. • Identify any patients who could be brought forward to cover short notice cancellations. • Confirm list order with local agreement as to which patient is first on the list.
Week 1
• Review list utilisation and check all available slots have been allocated. • Re-confirm list orders, particularly for urgent cases such as oncology. • Review % booked utilisation and aim to fill any unused slots; unfilled lists may be stood down with staff redeployed. • Ensure appropriate perioperative staff skill mix and trained cover. • Ensure availability of all required equipment, including loan kit.
Week 0
• Contact patients ahead of pre-admission to confirm attendance.

Principle 3 – Pooled Patient Lists and Standby Lists

Definitions
• **Pooled Patient Lists** refer to routine waiting lists made up of patients listed for surgery involving generic procedures, but not sub-specialised procedures. These patients have been deemed fit for surgery through the pre-operative assessment process. Patients who have not completed a pre-assessment should not be added onto a Pooled Patient List. Inclusion must be based on patient consent, and all patients should be aware they are on a Pooled Patient List. • **Standby Lists** are waiting lists comprising patients who are scheduled for a procedure, but have not yet been assigned a specific date. These patients may be contacted at short notice if a cancellation occurs, allowing their surgery to proceed sooner. Only patients who have completed the pre-assessment process should be added to a Standby List. All patients must give consent to be included and be informed how the standby list operates. Some Standby Lists will have patients named to a particular surgeon and these patients may be approached before a patient in a Pooled List.

Considerations for Creating Pooled Patient Lists

- P2 or Cancer does not form part of Pooled lists. However, there should be patients in the Pool who can be used to backfill cancer lists if these are not fully allocated with Cancer or P2 cases.
- Depending on the pathway for early screening and pre-operative assessment, Pooled patients should be deemed fit for surgery following their initial assessment, or represent a mix of high, medium and low risk patients who have been waiting the longest for their surgery.
- There should be enough patients in the Pool to fill 6 or 7 weeks of lists, based on the usual case mix and theatre timetable of the surgeon or speciality.
- The Pool should be regularly maintained by adding a similar case mix of patients each week, with an additional 10% to account for DNAs or failed assessments. The timescale for individual patients may alter according to their risk.
- The Pool of patients should then be sub-divided into patients who will be suitable for scheduling, and those willing to accept short notice or standby appointments.
- Good communication between the Scheduling team and the pre-operative assessment team is essential.

Considerations for Creating Standby Lists

- Define clear inclusion criteria for patients to be added to the Standby Lists such as specific conditions, demographic factors etc.
- Develop a method for prioritising patients on Standby Lists, taking into account urgency, risk, and time already waited.
- Ensure a system is in place for identifying pre-assessment dates so that this is up-to-date.
- Establish a reliable communication method for contacting patients at short notice, which the patient has consented to.
- Where a patient is contacted but does not undergo surgery (e.g. due to an earlier procedure running over time), consider offering an earlier surgical date, where appropriate.

General Considerations

- Patients on an urgent cancer list should not be added to either Pooled or Standby Lists. These patients should already be on an Urgent Suspicion of Cancer (USC) pathway. Pooled and Standby lists are for routine procedures only.
- Scheduling teams should have appropriate access to Pooled and Standby Lists.
- Pooled and Standby Lists should be regularly reviewed and updated.
- A process should be developed for identifying patients who may appear on more than one list.
- Consider developing local short-notice criteria for Standby Lists. For example, patients should be able to attend hospital within 1 to 2 hours, have their own transport, not require pre-operative adjustment (e.g. medication that needs to be stopped), and not require an interpreter. These will vary by specialty and procedure.

- Patients who have previously been cancelled should be prioritised appropriately to avoid repeated cancellations.
- Consider the distance and time some patients may need to travel particularly if on Standby or considered a potential Golden Patient.
- The type of anaesthetic (e.g. local or general anaesthetic) should be taken into account.
- Consider patient suitability for day case procedures, recognising that some centres now routinely offer joint surgeries as day cases. Listing day cases earlier in the session can help avoid unnecessary overnight stays.
- Consider availability of the local estate and environment and any specialised equipment.
- Ensure appropriate staffing levels and skill mix are available, including consideration of cases requiring the need for additional staffing (e.g. more than one surgeon).
- Consider the capacity in related services, such as theatre recovery, which may impact scheduling.
- Consider any safeguarding interventions.
- Consider any additional support that may be needed by other services.
- Consider any other conditions and co-morbidities (e.g. dementia) that may require additional support. These patients will benefit from being scheduled earlier in the day.

Considerations for Agreeing the "Golden Patient"

- Patients should initially be identified by the Scheduling team with a final decision by the operating surgeon.
- Scheduling teams should consider staffing resources, for example, starting the list with a minor procedure while preparing another patient for major surgery may require additional anaesthetic support.
- Scheduling teams should be aware of the local estate. Some facilities may not have an anaesthetic room to allow for a "Golden Patient" to proceed.
- Ensure that all necessary equipment has been confirmed as present and available.
- Consideration should be given to surgery classified as less complex surgery; this will depend on the individual specialty.
- Prioritise patients with straightforward diagnoses.
- Consideration should be given to patients who adhere to prescribed treatments, follow medical advice and attend appointments consistently.
- Select patients who provide clear, detailed information about their health.
- Consideration should be given to patients who have completed all necessary tests and the first stage of consent has been received.
- Patients must have completed pre-assessment checks and been deemed fit for surgery.
- Consideration should be given to patients whose patient's notes are complete and available on the day.
- Foster a culture of proceeding without delay.

Principle 4 – Utilising Flexible Session Capacity and Backfilling Lists

Definitions

- **Flexible capacity** refers to the ability to adjust the number of operating sessions or the allocation of resources (such as staff, equipment, or time) based on fluctuating demand or unforeseen changes. It allows healthcare facilities to respond dynamically to variations in patient demand, staffing availability, and operational constraints.
- **Backfilling lists** refers to the process of filling gaps in theatres that are not being used by a particular speciality and are backfilled either by another surgeon from that same speciality or by another suitable speciality to ensure maximum utilisation.

Flexible Capacity

- The decision to reallocate resources should be made by a senior responsible person (or designated deputy) in consultation with the theatre management team, considering staffing skill mix, estate constraints, and equipment availability.
- Lists that do not have an identified surgeon should be offered to other users according to what the theatre staffing, estate, and equipment can support, and the specialties with the greatest demand according to clinical urgency and longest waiting patients.
- If the specialties with the highest demand have not utilised the list, it should be offered out to other specialities. If there has been no uptake by any speciality, and in alignment with 6-4-2-1-0 principles, the list should then be closed and staff reallocated accordingly.
- Specialties should allocate surgeons to available sessions through flexible job planning or by converting other direct clinical care sessions.
- Exceptional circumstances in a specialty may require additional short notice lists. Specialties should take into consideration adequate time for the list to be booked, including offering patients reasonable notice of their To Come In date.
- There should be good engagement across the team, including clinical and non-clinical staff, to ensure patients are ready to come on any list offered out.

Backfilling Lists

- Applying 6-4-2-1-0 methodology will maximise theatre utilisation
- Prioritising backlog to help reduce waiting times
- Coordinating and collaborating between specialities
- Maintaining flexibility
- Being adaptable
- Overseeing costs within allocated funding budgets
- Managing resources, including reprioritisation of resources as required

Further recommendations

- Consideration is given to developing national and/or regional lists for Pooled Patients.
- Consideration is given to agreeing a national consensus on procedures appropriate for Pooled Patient lists. This would initially focus on those procedures within the remit of the Perioperative Delivery Group (ENT, General Surgery, Gynaecology, Ophthalmology, Orthopaedics and Urology). Longer term this would include other specialties (e.g. Plastic Surgery).
- Consideration is given to developing bespoke training for Scheduling and Scheduling teams.

Appendix 1

Examples of procedures for pooled patient lists and standby lists - General Surgery (including Breast), ENT, Orthopaedics, Ophthalmology, Urology and Gynaecology

Procedures listed should be generic procedures that can be performed by any surgeon within that speciality i.e. not specialised procedures that can only be performed by one individual.

General Surgery and Breast	**Orthopaedics**
• Laparoscopic Cholecystectomy • Open Inguinal Hernia • Open Umbilical Hernia • Wide Local/Other Excision • Sentinel Lymph Node Biopsy/TAD • Total Mastectomy • Axillary Node Clearance • Other Op Breast • Op Duct of Breast • Removal of Prosthesis for Breast	• Common hip - primary non-complex total hip replacement • Common knee - primary non-complex total knee replacement • Common hand - carpal tunnel/trigger finger/simple Dupuytrens • Common shoulder • Common foot and ankle • Specialist hip/knee
ENT	**Ophthalmology**
• Adenoidectomy/Tonsillectomy • Insertion/Removal of Grommets • LA Excision Lesion of Skin Head/Neck	• Cataract
Urology	**Gynaecology**
• Flexible Cystoscopy +/- Botox • Endoscopic Resection Lesion Bladder • LA Circumcisions • LA Frenuloplasty • Dorsal Split • LA Scrotal Operations	• Laparoscopic Bilateral Saplingectomy • Bilateral Salpingo-oophorectomy • Cervical Smear • Diagnostic Laparoscopy • Endometrial Ablation • Endometrial/Vulval/Vaginal Biopsy • EUA • Excision Vulval/Vaginal Lesion • Hysteroscopy +/- Biopsy • Removal/replacement/insertion IUCD • Lap and Dye • Marsupialisation of cyst • Ovarian Cystectomy

Appendix 2

Prioritisation of theatre use in the event of speciality cancelling scheduled session

Standard Operating Procedure
NHS Ayrshire and Arran

1	Purpose
	To ensure that additional theatre resource is prioritised in order of need in the event of a speciality cancelling a regular scheduled theatre allocation.
2	**Background**
2.1	Specialities across NHS Ayrshire & Arran have regular allocated sessions in theatres. In the event that a surgeon is on annual leave the session is available for re-let to ensure full utilisation of theatre resource.
3	**Process**
3.1	In the event of a session “re-let” the Assistant General Manager (AGM) for Theatres will review the surgical waiting lists on the surgical shared drive. Services with extended waiting times will be offered re-lets in order of need. If these services are unable to use, this session will be offered out to remaining specialities.
3.4	**Responsibilities** AGM, Theatres to review waiting times on surgical W/L spreadsheet. In the event that the AGM, Theatres is not on site, responsibility will be deferred to surgical AGM to confirm speciality priority.

Resources

- British Orthopaedic Association (BOA), 14 November 2014, *Position Statement on Pooled Waiting Lists*, British Orthopaedic Association, **https://www.boa.ac.uk/static/518c2a65-d9a7-4e99-9b4afc9b81fcf9af/pooled-waiting-lists.pdf**, Accessed 30 May 2025

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