The Arthroplasty Day Surgery Pathway

A blueprint for day surgery in Scotland

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Background

The Centre of Sustainable Delivery (CfSD) was set up to support Scotland in working towards a better healthcare system building on existing work around redesign and transformation by assisting the roll-out of new techniques and innovations aimed at improving patient pathways, and offering assistance around tackling challenges across the health and care system.

- Though teams see increasing complexity and deconditioning in their patients due to extended waiting times for surgery, induced by the Covid-19 pandemic, offering day surgery even to a small proportion of patients brings benefits to patients and healthcare teams alike:
  - Opportunities for shared decision making and patient involvement in their care and pre/rehabilitation
  - Reduced likelihood of hospital acquired infections
  - Reduced need for inpatient beds (and reduced risk of surgery cancellations due to reduced reliance on inpatient bed availability)
  - Opportunities to make best use of operating times and hospital sites with reduced demand of overnights stay capacities
- This paper pulls together several programmes of work within the CfSD in one comprehensive document, offering Health Boards a blueprint in which to consider how best to test and embed arthroplasty day surgery pathways by outlining relevant definitions, protocols, sharing key success criteria and best practice examples from other NHS Scotland Health Boards.

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Overview

- Day surgery & length of stay definitions
- Recommended BADS length of stay distributions
- Nationally agreed ARISE protocol for arthroplasty in NHS Scotland
- Steps to success
- Day surgery pathway overview
  - Pre-hospital
  - Hospital
  - After discharge
- Implementation enablers
- Examples of local approaches
- Further resources & references
- Further help & support

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Definitions

Definition of Day Surgery as per BADS Directory of Procedures

'True' Day Surgery should be regarded as admission, treatment and discharge on the same calendar day ('zero night stay'), with an additional proviso of the episode having been pre-planned with day surgery intent and discharge to either patient's home or non-acute/non-rehab facility.

Definitions of Length of Stay in the BADS Directory of Procedures

Type of stay	Definition
Procedure Room	An operation that can be performed in a suitably clean area outside an operating theatre. The varying complexity of such procedures may require the commissioning of a specific environment and equipment beyond the expectation of a standard outpatient room (e.g. endoscopy or outpatient hysteroscopy suites).
Zero night stay	Patient admission, treatment and discharge occurring on the same calendar day. National definitions of Day Surgery also include the mandate that such care should be intentionally pre-planned.
One night stay	Patient admission, treatment and discharge occurring over two consecutive days.
Two night stay	Patient admission, treatment and discharge occurring over three consecutive days.

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Recommended length of stay distributions*

Procedure	Recommended % Procedure Room	Recommended % Day Case	Recommended % 1 night stay	Recommended % 2 night stay
Unicompartmental Knee Replacement	0	40	50	10
Total Knee Replacement	0	10	30	30
Total Hip Replacement	0	20	30	20

*As per BADS recommendations

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Agreed protocol

Perioperative Care Protocol for Same Day Primary Total Hip/Knee or Uni Knee - Arthroplasty Rehabilitation In Scotland Endeavour ARISE

Preoperative

- Pre-operative education, this can take the form of written/ oral / audio visual or face to face.
- Programme LoS for 0 days (this is just a target, patients should be D/C when they meet the criteria below).
- Pre-admission and review of pre-existing comorbidities and optimisation as appropriate e.g. anaemia, smoking and alcohol cessation.
- AKI risk assessment and management as per local protocol e.g. withhold ACE/ARB on day of surgery.
- Day of surgery admission with fasting from 6 hours for food with minimised fasting for clear fluids as per locally agreed pathway. Following Sip to Send principles is encouraged.

Intraoperative

- +/- use of tourniquet as per local protocol
- No routine urinary catheterisation
- Primary anaesthetic as per local protocol (e.g. Spinal or GA). IT Opioids should only be used in specific patients. It may necessitate an overnight stay and should not be routine practice.
- Local Anaesthetic infiltration to joint as per local protocol
- Regional nerve block as per local protocol (knees only), consideration of effect on mobilisation should be paramount.
- Steroids as per local protocol – A minimum dose of 10mg is recommended (Lavand'homme et al 2022)
- Routine use of Tranexamic Acid
- Dual Antiemetics: as per local protocol (e.g. consider in conjunction with Dexamethasone)
- Fluid Management – consideration given to suspected blood loss and fasting.

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Agreed protocol (cont.)

Perioperative Care Protocol for Same Day Primary Total Hip/Knee or Uni Knee - Arthroplasty Rehabilitation In Scotland Endeavour ARISE

Postoperative

- Multimodal Analgesia including oral paracetamol + NSAID **OR** Cox 2 Inhibitor 6 hourly (if not contraindicated)
- Use of Step 3 Analgesia as per local protocol e.g. e.g restricted time-limited dosing if using long-acting Step 3 opioid preparations for example, 24hrs for THR / 48hrs for TKR. Short acting step 3 Analgesia may be used alone in preference or addition to long-acting preparations as above for functional pain with limited post-operative provision as per local protocol
- Ensure adequate step down from strong opioids planned
- Antiemetic & bowel management as per local protocol
- Discontinue IV Fluids in recovery & commence oral intake
- Mobilise as soon as possible. Nursing and AHP staff should be enabled to assess and begin as soon as possible.

Functional criterion led discharge (based on Husted et al 2011)

- Ability to get dressed and independence with personal care
- Ability to get in/out of bed/chair/toilet independently
- Mobile with appropriate walking aid and complete stairs where appropriate
- In addition, sufficient oral pain management (VAS <5 on activity)
- Advice and emergency contact details **available on discharge** with agreed follow up arranged

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Steps to success

1. “First better, then faster”

- Start small, get the basics right first
- Have clear SOPs agreed
- Adopt a continuous improvement approach

2. It’s a team effort - involve the whole hospital team

- Forming partnerships from the start with all relevant teams that support the patient pathway such as pharmacy, physio/OT and diagnostics is essential, as these teams will also need to change and adapt to enable a day surgery pathway (e.g. extended physio/OT cover, involvement of pharmacy to prescribe and dispense take-home medication in advance)
- Create multi-disciplinary teams

3. Understand the whole day surgery pathway

- Redesigning one part of the patient pathway may inadvertently impact on another part of the pathway. Any pathway redesign needs to take account of the whole patient pathway.

Steps to success (cont.)

4. Consider patient selection and listing

- Identify a suitable 1st patient (consider age, ASA, BMI) and ensure day surgery cases are 1st on the theatre list
- ‘Start with the end in mind’ – discharge planning should start at the beginning of the pathway

5. Invest in patient education and empowerment

- From the outset, patients need to be informed and educated about the day surgery pathway and its benefit – all staff interacting with the patient, throughout the pathway, need to reinforce the same messages.
- Enable the patient to play a pro-active part in their own prehabilitation and recovery.

6. Invest in staff training and education

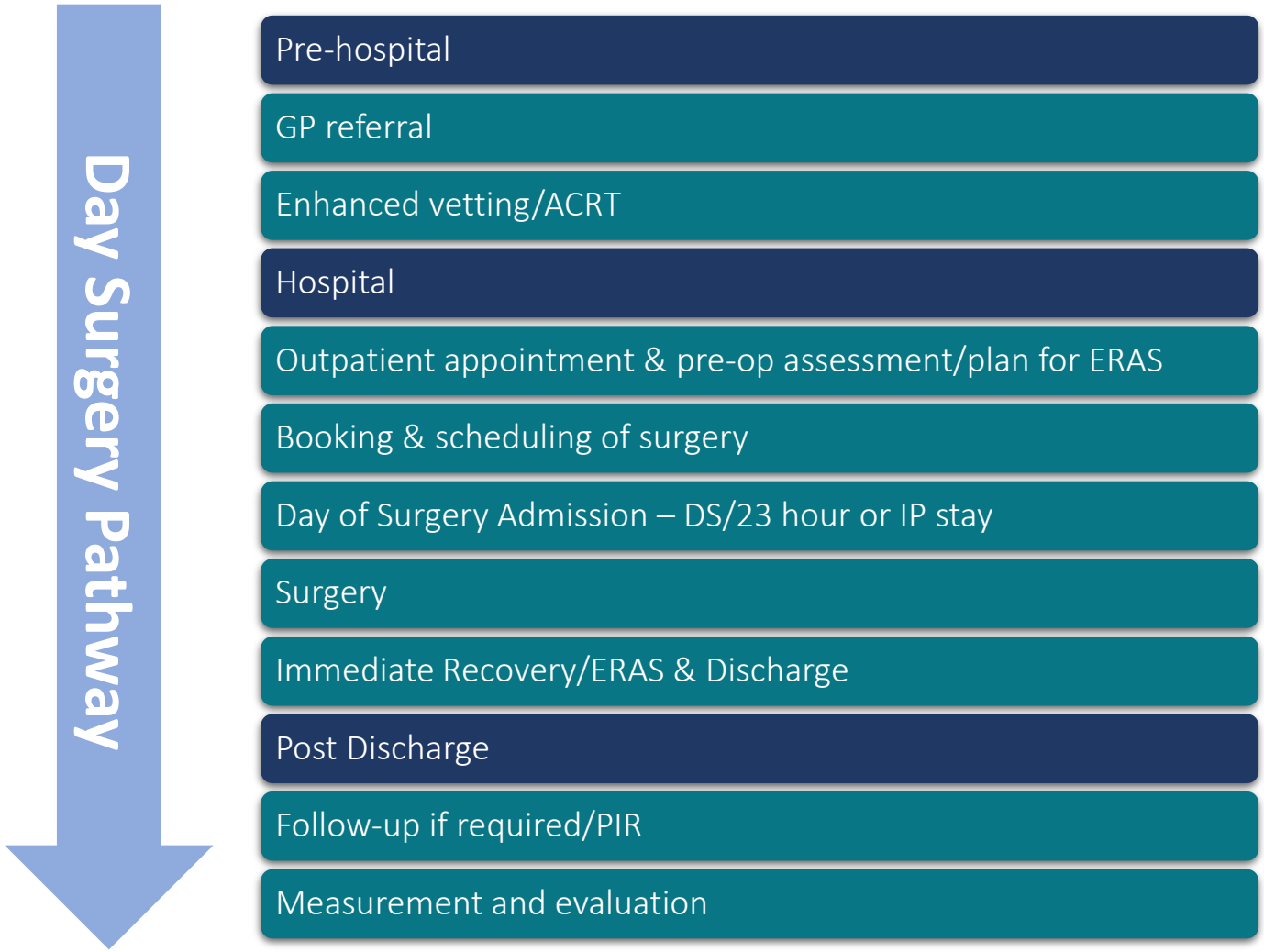
- Developing career pathways for the whole theatre team, investing in training and education and identifying opportunities to upskill staff will maximise productivity.
- Early mobilisation is key for discharging on the day of surgery – consider physio/OT teams training nursing teams to support early mobilisation.
- Agree and embed criteria-led discharge.

7. Don’t forget to celebrate successes

- Ensure to share and celebrate small successes along the way

Day surgery pathway overview

These slides provide further aspects to consider when embedding a day surgery pathway, looking at the whole pathway from GP referral to post-discharge.



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Pre-hospital

Pre-hospital

GP Referral

- Day surgery as the norm – key communication from the outset
- Standardised referral criteria
- GP to advise on day surgery procedure from the beginning
- Consider patient information at that point

Enhanced vetting/ACRT

- Before deciding on surgery - consider making best use of Realistic Medicine approaches:
  - Joint decision-making tools
  - Awareness of low clinical and patient value procedures
  - Non-surgical interventions
  - Opt-in pathways for patients

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Hospital

Hospital

Outpatient appointment & pre-op assessment/plan for ERAS

- One stop assessment and consent
- Optimise use of remote pre-op assessment solutions
- Day surgery as default (pre-assessment teams to change to inpatient stay based on clear exclusion criteria)
- Patient communication: reiterate procedure will be performed as day case at this point
- Identify any additional support required to enable day of surgery discharge (e.g. overnight carer/transport)
- Identify necessary prehabilitation and ERAS actions and enable MDT input

Booking & scheduling of surgery

- Consider best use of theatre capacity; dedicated day surgery lists can have benefits but some day cases interspersed with majors can also make best use of theatre time
- Implement 6-4-2 booking model

Day of surgery admission – DS/23 hour or IP stay

- Set up a dedicated day surgery admissions areas if possible – based on facilities and resources
- Explore staggering of admissions
- Encourage patient to walk to theatre (if feasible)
- Explore how to reduce on-the-day cancellations

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Hospital (cont.)

Hospital (cont.)

Surgery

- Explore how to best use existing facilities and rooms available
- Local and regional anaesthetics as the norm unless contraindicated – provide patient with informed choice
- Use day surgery trolleys/recliners instead of hospital beds in dedicated day surgery areas

Immediate recovery/ERAS and discharge

- Establish dedicated day surgery recovery and discharge areas (if possible)
- Consider opening hours of recovery and discharge areas to allow for day of surgery discharge
- Embed criteria-led discharge making best use of decision support tools and nurse-led pathways
- Facilitate timely prescribing/dispensing of take-home analgesia
- Ensure AHP and radiology support can be provided before discharge (as required)
- Ensure patient information provides clear information on pain management, wound care, red flag symptoms, emergency numbers, etc
- Provide patients with Patient Initiated Return (PIR) information
- Implement Enhanced Recovery After Surgery

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After discharge

Post Discharge

Follow-up if required/PIR

- Develop and embed standardised follow-up protocol
- Clear communication re patient-initiated contact routes, e.g. prescribing of additional pain medication required without input of primary care colleagues, access to further advice & support
- Embed patient surveys/questionnaires

Measurement and evaluation

- Agree measurement framework and collate/analyse on a routine basis
- Benchmark with national data sets
- Use quantitative and qualitative data to inform continuous improvement, e.g. use patient feedback to continuously improve service

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Implementation enablers

- Effective, proactive Clinical Leadership & Multi-disciplinary team approach
- Co-production & collaboration
- Data-driven improvements
- Realistic Medicine principles
- Service and role redesign
- Day Surgery as the norm
- Establishing high-performing teams
- Jointly agree patient selection criteria, day surgery pathways and SOPs
- Executive sponsorship
- Staff wellbeing

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Examples of local approaches

Arthroplasty Day Surgery event in March 2022

Including presentations from NHS Fife, NHS Golden Jubilee, NHS Greater Glasgow & Clyde and NHS Tayside.

- The recording is available here
- Slides can be accessed here

The below teams kindly shared their materials

NHS GGC (Stobhill Hospital)

- ERAS Anaesthetic Guidance
- Pathway (as presented in March 2022)
- Patient post op TKR medication booklet
- Patient post op UKR medication booklet
- Patient post op THR medication booklet

NHS Fife

- Day case TKR protocol
- Anaesthetic day case protocol

Southwest Ambulatory Orthopaedic Centre (SWAOC)

- Pathway THR TKR
- Pre-op Assessment Guideline
- Anaesthesia Quick Reference Guide
- Generic patient information
- Patient information booklet THR
- Patient information booklet TKR
- Patient information - advice and follow-up
- Patient information – secondary recovery

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Further resources & references

Day Surgery Implementation Support Pack

- GIRFT/BADS National Day Surgery Delivery Pack https://www.gettingitrightfirsttime.co.uk/bpl/day-surgery/

References

- Gromov et al (2017) Feasibility of outpatient total hip and knee arthroplasty in unselected patients. A prospective 2-center study, Acta Orthopaedica; 88(5): 516-521 https://doi.org/10.1080/17453674.2017.1314158
- Hall, Andrew J and Dunstan, Edward (2021) Day-case total hip arthroplasty: a safe and sustainable approach to improve satisfaction and productivity, and meet the needs of the orthopaedic population, Orthopaedics and Trauma; 36(1): 14-21 https://doi.org/10.1016/j.mporth.2021.11.003
- Husted et al (2011) Why still in hospital after fast-tracked hip and knee arthroplasty?, Acta Orthopaedica, 82(6): 679-684 https://doi.org/10.3109/17453674.2011.636682
- Lavand'homme et al (2022) Pain management after total knee arthroplasty. PROcedure SPEcific Postoperative Pain ManagemenT recommendations, EJA, 39 (9): 743-757 https://doi.org/10.1097/eja.0000000000001691
- Wainwright et al (2020) Consensus statement for perioperative care in total hip replacement and total knee replacement surgery: Enhanced Recovery After Surgery (ERAS®) Society recommendations, Acta Orthopaedica, 91(1): 3-19 https://doi.org/10.1080/17453674.2019.1683790

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Further help & support

For further support and help please reach out to the CfSD team

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