Direct to list: redesigning pre-operative assessment for regional anaesthesia

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Abstract

Background: Following implementation of a block room model for day-case awake upper limb surgery under regional anaesthesia (RA), service evaluation demonstrated reliability and improved access to day surgery for patients with comorbidities. However, limited pre-operative assessment (POA) capacity was identified as a bottleneck to further expansion, prompting the development of a streamlined 'direct-to-list' POA pathway.

Methods: A structured questionnaire identified patients suitable for direct-to-list POA, assessing consent, ability to tolerate positioning, and key risks including anticoagulation, diabetes, and immunomodulatory therapy. Patients completed the questionnaire with support from a nurse or clinical support worker at listing or at a brief appointment (mean 10 minutes). Concerns were managed via predefined guidance or escalated to standard POA.

Results: Between May 2025 and February 2026, 131 patients underwent awake hand and wrist surgery under brachial plexus block via this pathway. Ages ranged from 24 to 85 years; 43.5% were ≥65 years and 23.7% were ASA ≥III. One failed block required conversion to general anaesthesia; adequate pre-operative information allowed safe progression.

Conclusions: A streamlined questionnaire-based POA pathway for patients undergoing awake RA surgery is safe and effective across a diverse patient cohort including older and higher-risk patients. The pathway generated estimated cost savings of £79,910 and released 18 hours of consultant anaesthetist clinic time within nine months of implementation, while maintaining safe access to day-case surgery.

Keywords: Pre-operative assessment, Regional anaesthesia, Day surgery, Block room, Pathway redesign, Service improvement.

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Introduction

Regional anaesthesia (RA) block rooms have emerged as an effective model for delivering awake day-case surgery, improving theatre efficiency through parallel processing while maintaining safe access for patients with significant comorbidities [1]. Following the successful implementation of a block room service for awake upper limb surgery at our institution, service evaluation confirmed the model's reliability and expanded patient access to day surgery.

However, as demand for the service grew, limited pre-operative assessment (POA) capacity was identified as a significant bottleneck to further expansion. Standard POA appointments cost approximately £610 and take 45 minutes [2], representing a substantial resource burden. For patients undergoing awake surgery under RA, the anaesthetic considerations differ considerably from those requiring general anaesthesia, creating an opportunity to redesign the POA pathway to better reflect clinical need.

We describe the development and implementation of a streamlined 'direct-to-list' POA pathway specifically designed for patients undergoing awake day-case surgery under RA, with the aim of reducing resource utilisation while maintaining patient safety.

Methods

A structured questionnaire was developed to identify patients suitable for direct-to-list POA. The questionnaire assessed the key domains presented in Table I.

Table I. Streamlined POA questionnaire screening criteria and predefined actions.

Screening criterion	Action if identified
Consent to awake surgery under block	*Standard eligibility check*
Ability to lie flat and still for up to 2 hours	*Standard eligibility check*
Serious issues with shoulder mobility	*Standard eligibility check*
Anticoagulation (DOAC, warfarin, or LMWH)	*May need bridging depending on indication*
Diabetes	*HbA1c required*
Uncontrolled hypertension (systolic >180 mmHg or diastolic >110 mmHg)	*GP referral for blood pressure control*
Prescribed immunomodulatory injections (biologics)	*May need to be withheld depending on indication*
Allergies to local anaesthesia	*Standard eligibility check*
Previous complications of anaesthesia	*Standard eligibility check*
Neurological disorders affecting nerves/movement	*Standard eligibility check*

DOAC: Direct oral anticoagulant. GP: General practitioner. HbA1c: Glycated haemoglobin. LMWH: Low-molecular-weight heparin.

Patients completed the questionnaire with support from a nurse or clinical support worker, either at the point of surgical listing or at a brief dedicated appointment (mean 10 minutes). Where concerns were identified, predefined guidance directed management or escalated to standard full POA. Patients were deemed unsuitable for the direct-to-list pathway if they required a full anaesthetic review.

Data were collected prospectively for all patients undergoing awake hand and wrist surgery under brachial plexus block via this pathway between May 2025 and February 2026.

Results

Between May 2025 and February 2026, 131 patients underwent awake hand and wrist surgery under brachial plexus block via the streamlined POA pathway. All 131 patients were discharged home on the same day as planned. Patient ages ranged from 24 to 85 years, with 43.5% aged ≥65 years and 23.7% classified as American Society of Anesthesiologists (ASA) physical status ≥III, demonstrating that the pathway successfully facilitated access for older and higher-risk patients.

One patient experienced a failed block requiring conversion to general anaesthesia. In this case, adequate pre-operative information obtained through the streamlined pathway allowed safe and timely progression to general anaesthesia without patient harm.

Compared with standard POA appointments (estimated at £610 per appointment, 45 minutes duration [2]), the pathway yielded an estimated cost saving of £79,910 and released 18 hours of consultant anaesthetist clinic time over the nine-month implementation period.

Discussion

This study demonstrates that a structured, questionnaire-based 'direct-to-list' POA pathway can safely and efficiently replace standard POA appointments for selected patients undergoing awake day-case surgery under regional anaesthesia. The pathway appeared safe across a diverse cohort, including patients who would traditionally be considered higher risk, with 43.5% aged ≥65 years and nearly a quarter classified as ASA ≥III.

The financial and capacity gains are substantial. An estimated saving of £79,910 and the release of 18 hours of consultant anaesthetist time within just nine months of implementation represent a substantial efficiency gain that does not compromise safety. The single case of failed block managed safely with conversion to general anaesthesia illustrates that effective information gathering through the streamlined pathway itself contributes to patient safety outcomes.

The pathway's design, centred on a focused, condition-specific questionnaire administered by a nurse or clinical support worker, reflects a broader principle of task redistribution in ambulatory surgical care. By targeting the POA assessment to the specific risks relevant to awake RA surgery, unnecessary appointments are avoided without increasing clinical risk. This aligns with national priorities to improve efficiency and access in day surgery [1].

Limitations include the single-centre design and the relatively short follow-up period of nine months. Longer-term outcome data, including rates of cancellation, complication, and conversion to general anaesthesia, will be important to establish the sustained safety of the pathway. Prospective evaluation of patient experience and satisfaction with the abbreviated assessment process would also be valuable.

Conclusions

A streamlined 'direct-to-list' POA pathway for patients undergoing awake upper limb surgery under regional anaesthesia is safe, effective, and resource-efficient. Within nine months, the pathway delivered estimated savings of almost £80,000 and released consultant clinic capacity, while maintaining safe access to day-case surgery for a diverse patient population including older and higher-risk patients.

This model provides a reproducible, transferable template for other centres seeking to expand regional anaesthesia block room services without being constrained by standard POA capacity. It demonstrates that thoughtful pathway redesign, targeting assessment to procedure-specific risk, can unlock significant efficiency gains without compromising patient safety.

Author contributions

EM: Methodology, data collection, writing – original draft.

MT: Methodology, data collection and analysis.

NP: Project administration and service coordination.

DM: Conceptualisation, supervision, critical revision of the manuscript.

LH: Supervision, critical revision of the manuscript.

IM: Supervision, critical revision of the manuscript.

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Ethics approval and consent to participate

This study constitutes a service evaluation and quality improvement initiative. No patient-identifiable data were collected, and no experimental interventions were performed; formal ethical approval was therefore not required in accordance with local institutional policy. All patients received standard clinical care.

Disclosures / conflicts of interest statement

None.

References

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