An Evaluation of Day 1 (Telephone and In-Person Consultations) Versus Day 7 Post Op VR Reviews at Singleton Hospital

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Introduction and Background

There is an ongoing debate within the field of vitreoretinal (VR) surgery regarding the necessity of a day 1 postoperative review. Historically, day 1 reviews were considered essential following surgeries with high complication risks, such as intracapsular and extracapsular cataract extractions in the 1970s and 1980s. Advances in surgical techniques, particularly with the introduction of phacoemulsification and smaller gauge vitrectomy instruments, have significantly reduced postoperative complication rates. As a result, the necessity of day 1 reviews, particularly for low-risk, uncomplicated cases, has been questioned.

Professional societies such as BEAVRS and EVRS do not mandate day 1 reviews but acknowledge that they are commonly practiced, especially following macular hole surgery. Increasing evidence supports an individualized, risk-based approach to postoperative follow-up, emphasizing patient-specific factors rather than a one-size-fits-all protocol. Additionally, the integration of telemedicine has introduced a new dimension to postoperative care, offering greater convenience but also raising concerns about communication barriers and patient understanding.

This project was designed to investigate whether telephone consultations could effectively replace in-person day 1 reviews for low-risk VR surgery patients, and to explore the ethical and clinical implications of individualized follow-up schedules. Key questions included the optimal timing for reviews, the feasibility of patient self-assessment, and the development of robust risk stratification criteria.

RISK STRATIFICATION TOOL

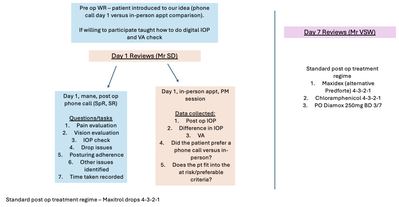
Recommendations for which Patients to see Day 1 Post Op - At Risk/Preferable

- Only eye
- Expansile gas used
- Intraoperative complications
- Pt preference
- Oc HTN / POAG / NVG
- History of steroid response
- Complex retinal detachment repair
- Trauma cases
- Prolonged surgery >1 hour
- RSO patients
- Combined anterior and posterior segment surgery
- Pre-existing uveitis
- Others to consider: younger patients have a more intense inflammatory response, extensive or repeated laser/cryo

Methods

This study involved both prospective and retrospective data collection. Day 1 review patients were enrolled prospectively between October 2024 and March 2025, while Day 7 review patients were primarily analyzed retrospectively with some prospective elements.

Patients were introduced to the study during their preoperative ward round and instructed on performing basic self-assessments, including digital intraocular pressure (IOP) checks and visual acuity (VA) assessments. Patients consenting to telephone follow-up were guided on identifying hand movements, counting fingers, and describing environmental details to assess VA.



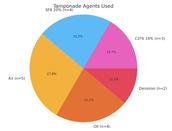
The Day 1 cohort was divided into those receiving a telephone consultation versus those attending in-person appointments. Data collected included postoperative IOP measurements, vision assessment outcomes, drop adherence, pain evaluation, posturing compliance, and overall patient preference for consultation mode. Standardized postoperative medication regimens were prescribed.

Risk stratification criteria were established to identify patients warranting mandatory in-person reviews, focusing on high-risk cases such as those with an only eye, expansile gas tamponade, intraoperative complications, glaucoma history, and complex retinal detachment repairs.

Results

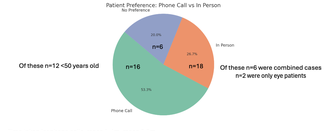
Aspect	Day 1 Cohort (n=30)	Day 7 Cohort (n=24)
Number of patients	30	24
Pre-identified at-risk patients	12 (no complications): n=9 combined cases, n=3 only eyes	12 (no complications)
Age	Range 37-96, mean 60.5	Range 12-77, mean 50
Sex	18 male, 12 female	n=17 males and n=13 females
Types of Surgery	Posterior segment alone n=21 (membrane peels, RSO, SOI) Combined n=9 (n=2 Carlevale, n=9 phase + IOL)	
Postoperative complications	None significant	None significant
IOP change significance	Not statistically significant (p=0.18, mean IOP pre op 15mmHg, post op 13.5mmHg)	Stable (15 mmHg pre and post)
IOP outliers	4 patients (2 increased, 2 decreased)	2 patients
Re-presentations within 6 weeks	2 patients	2 patients (1 known NVG, 1 steroid response)
Consultation preference	16 preferred telephone consultations; complex cases preferred in-person	-
Accuracy of self-assessment (VA/IOP)	85% / 86.7%	-
Mean phone call duration	2.3 minutes	-
Mean pre-op and post-op IOP	Pre op 15mmHg, post op 13.5mmHg	15 mmHg pre and post

DAY 1 GRAPHICAL DATA



Day 1 Data

- Tamponade used



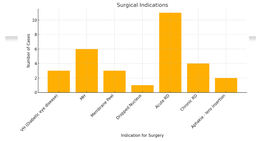
Time taken for phone calls, range 1-4m, mean 2.3m

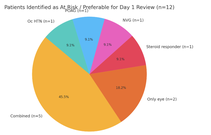
IOP Analysis	
	n=9 no change in IOP
	n=5 IOP increased by up to +5mmHg
	n=9 IOP decreased by up to -5mHg
	n=3 IOP reduction of -6mmHg exactly

Outliers:	
n=1, +16 (0-16)	Only eye patient, CB shutdown, oil 5000 added, h/o multiple RD surgeries. Phone call - stated moderate pain and a firm eye (comparable to the other eye)
n=1, +13 (13-26)	RD patient, vity / cryo / gas C2F6 16%. Phone call - indicated poor vision, soft eye on digital check
n=1, -10 (14-4)	F4H5 washout in a diabetic with a previous history of dropped nucleus. Nil tamponade. Phone call - reported mild pain, firm eye reported.
n=1, -12 (19-7)	Routine delam, no tamponade, no pain reported, firm eye reported

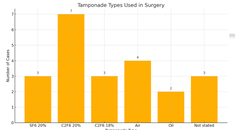
VA comparison	Phone call	In person	Accuracy
HM	n=17	n=15	88.2%
CF	n=6	n=4	66.7% NB: 1 patient was actually HM and the other patient was 1.10
Details seen	n=7	n=7	100%

DAY 7 GRAPHICAL DATA





IOP Analysis	
	n=17 no difference
	IOP difference up to +5mmHg: n=5
	IOP difference up to -5mmHg: n=6



Discussion

The findings of this study support the safe use of telemedicine consultations for low-risk VR patients on day 1 postoperatively. High-risk patients can be identified reliably through preoperative criteria, allowing individualized follow-up planning.

Several factors influencing postoperative IOP were identified, including the type of tamponade agent used, surgical complexity, combination with anterior segment procedures, and individual patient characteristics such as age, sex, and steroid responsiveness. Complex surgeries and patients receiving expansile gas were more prone to IOP elevation, justifying in-person reviews.

Telephone consultations were well-received by most patients and provided an efficient, patient-centered approach to postoperative care. However, considerations regarding language barriers, hearing impairment, and technological access must be addressed to ensure equitable care.

Future recommendations include refining the criteria for mandatory in-person day 1 reviews, expanding patient education on self-assessment, and considering wider implementation of telemedicine follow-up in low-risk VR surgery populations.

CONCLUSIONS

- D1 versus D7 – an ongoing debate. Surgeon and patient preference factors exist.
- For low risk, uncomplicated cases, could telephone consultations replace in person reviews?
- Consider low risk versus at risk patients (risk stratification tool)
- The most important stakeholder is the patient, therefore individualise post op care (equity)