Opioids in Total Joint Arthroplasty

The 2020 Clinical Practice Playbook

AAHKS
AMERICAN ASSOCIATION OF HIP AND KNEE SURGEONS

ASRA AAOS The Hip Society The Knee Society

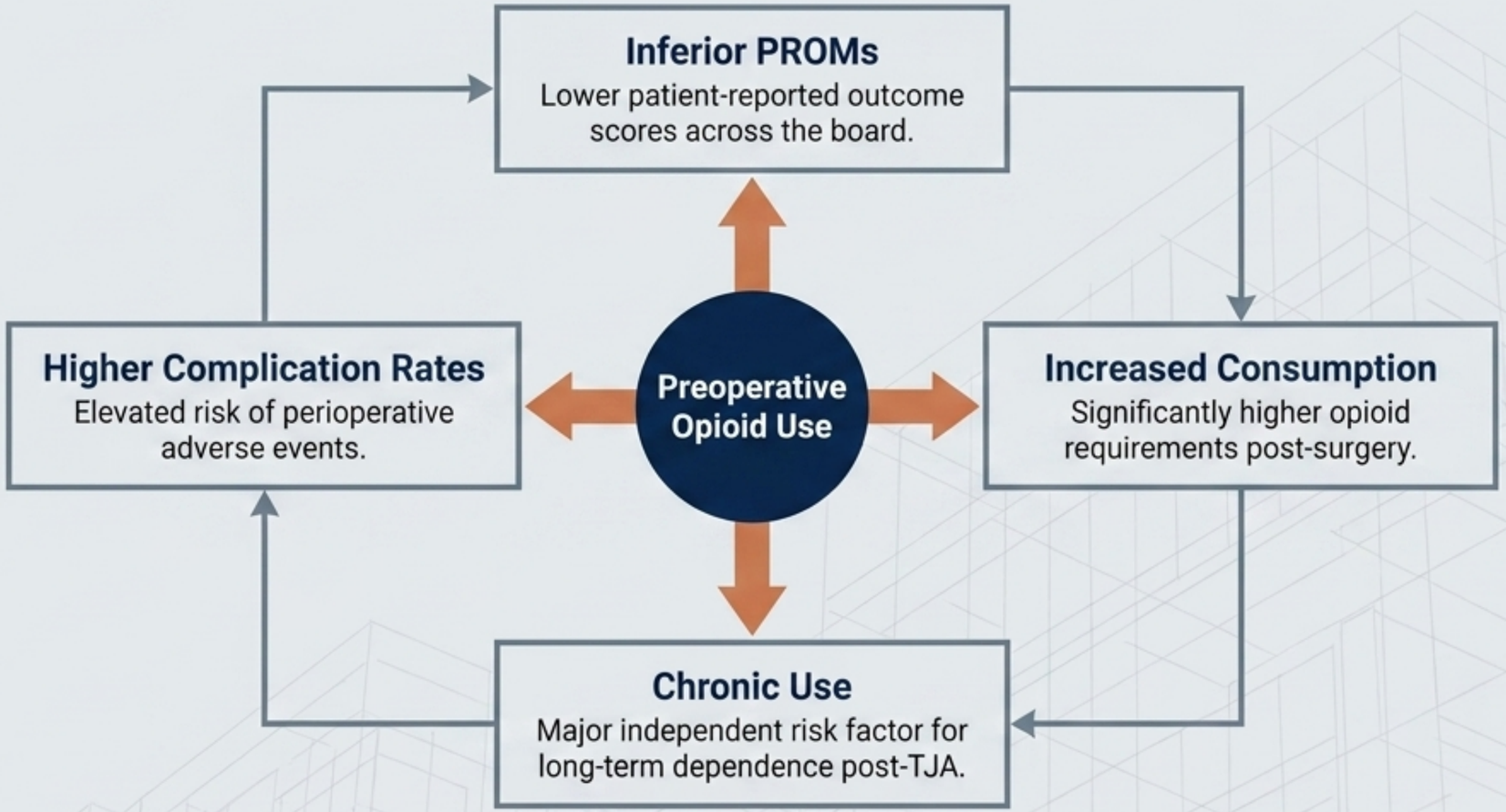
Evidence-based protocols to combat the opioid epidemic while maintaining excellent patient care in primary TJA.

Synthesized from the joint systematic review by AAHKS, ASRA, and AAOS, this playbook transforms seven critical guideline questions into a cohesive timeline for clinical implementation.

PHASE 1: PREOPERATIVE EVALUATION

Moderate Recommendation

The Cascade of Preoperative Opioid Use



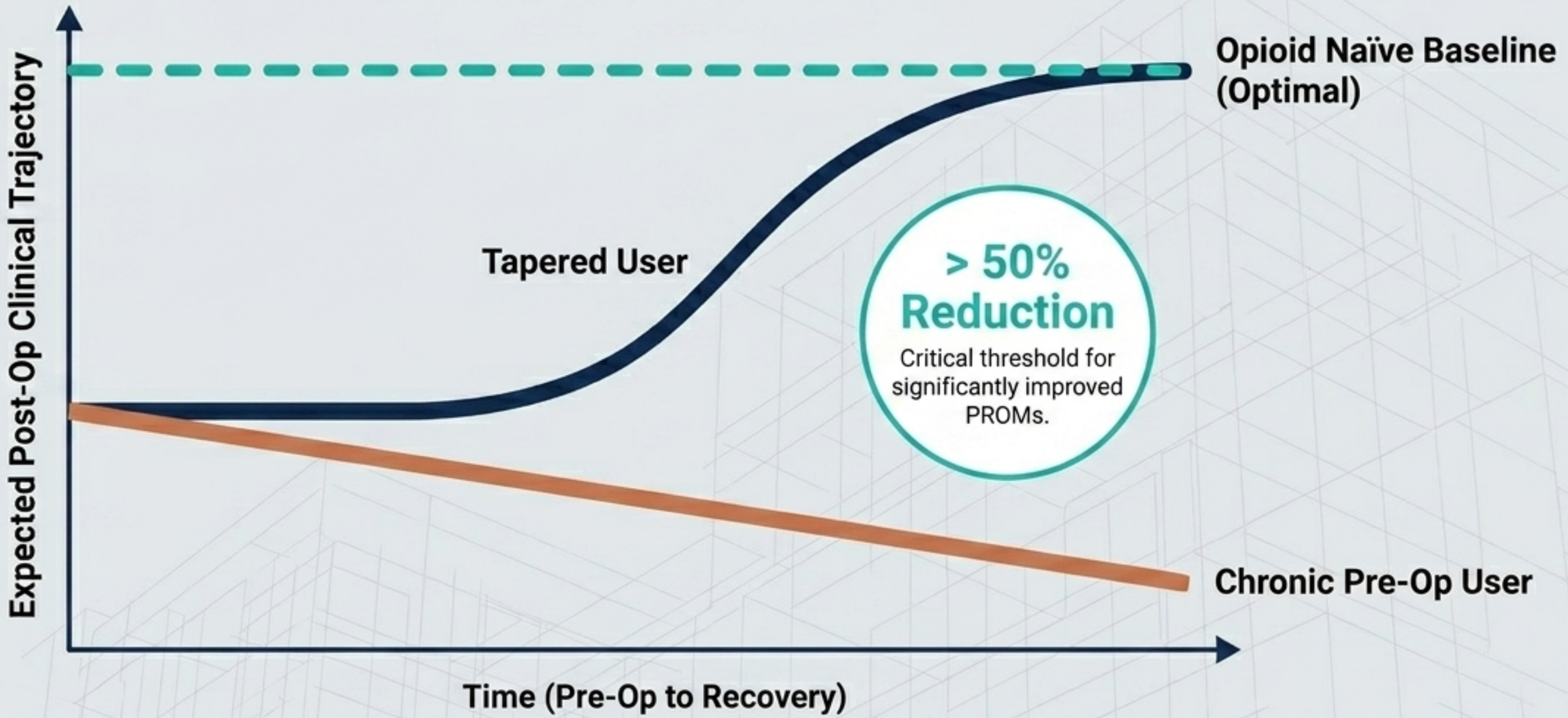
Key Takeaway: Preoperative opioid use is not a benign baseline; it is a primary driver of post-TJA clinical failure and compounding risk.

PHASE 1: PREOPERATIVE EVALUATION

Bending the Curve Through Reduction

Limited Recommendation

The Weaning Trajectory



PHASE 1: PREOPERATIVE EVALUATION

Pre-Op Opioid Patient Trajectories

The Opioid Naïve Patient	The Chronic Pre-Op User	The Tapered User (>50% Reduction)
Expected PROMs: Baseline (Optimal)	Expected PROMs: Inferior	Expected PROMs: Significantly Improved
Post-Op Pain Control: Standard	Post-Op Pain Control: Difficult / High Consumption	Post-Op Pain Control: Normalized
Chronic Risk: Low	Chronic Risk: High	Chronic Risk: Mitigated

Clinical Mandate: Aggressive preoperative identification and reduction of opioid use is essential for optimal surgical outcomes.

PHASE 2: IMMEDIATE PRE-OP

Pre-Emptive Administration

Strong Recommendation

Clinical Benefits (First 72 Hours)

- Reduces post-operative pain (VAS scores)
- Decreases overall opioid consumption post-TJA

Compounding Dangers

- High risk of respiratory depression and sedation when stacked with intra- or post-op opioids

Pre-emptive opioids (e.g., transdermal fentanyl) provide clear 72-hour analgesic benefits, but **must be strictly managed to prevent stacking** complications.

PHASE 3: INTRAOPERATIVE

Intraoperative Administration

Moderate Recommendation

Reduces post-operative opioid consumption.

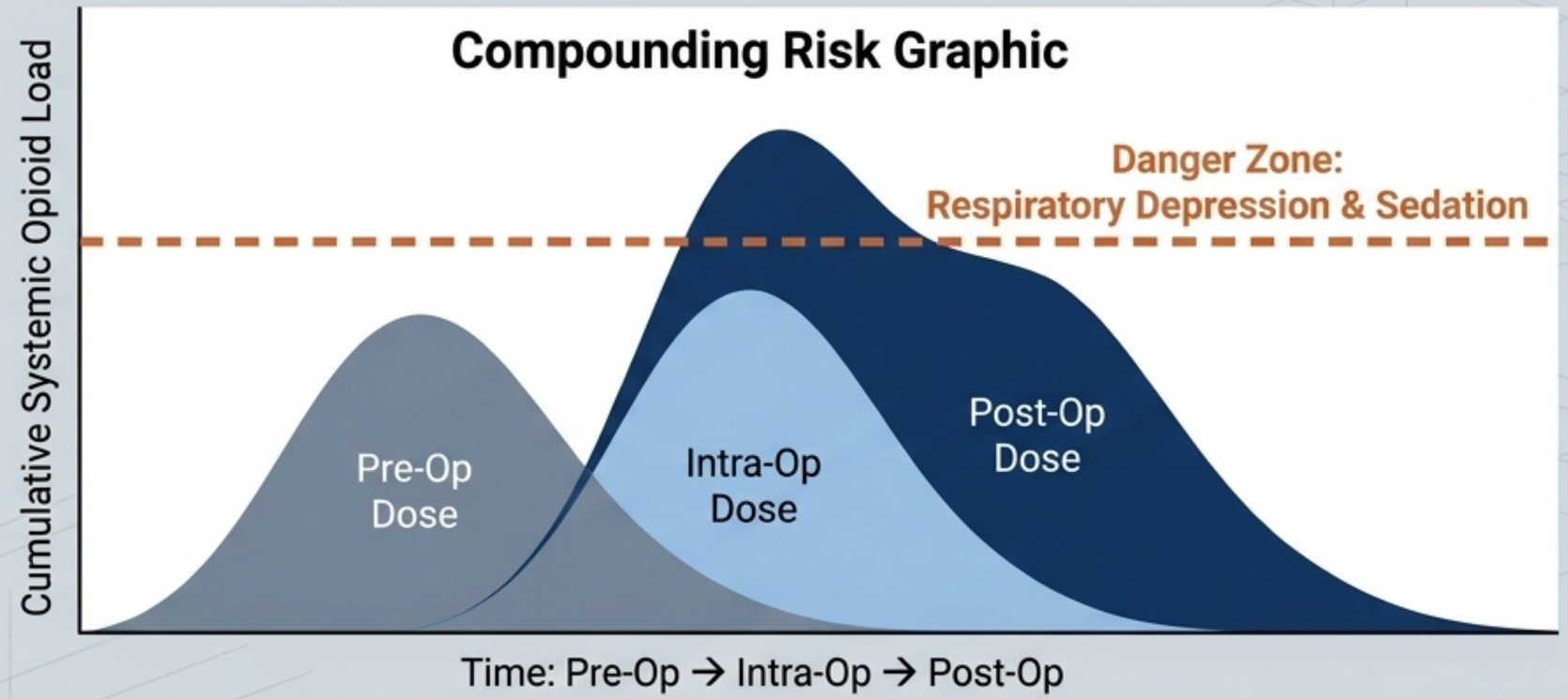
NO EFFECT on postoperative pain (VAS scores) within the first 72 hours.

Compounding Dangers: Sedation and respiratory depression when layered with other perioperative doses.

Unlike immediate pre-op administration, intraoperative opioids do not improve early post-op pain, making their routine inclusion in protocols highly questionable given the compounding risks.

PERIOPERATIVE WARNING

The Compounding Danger Zone

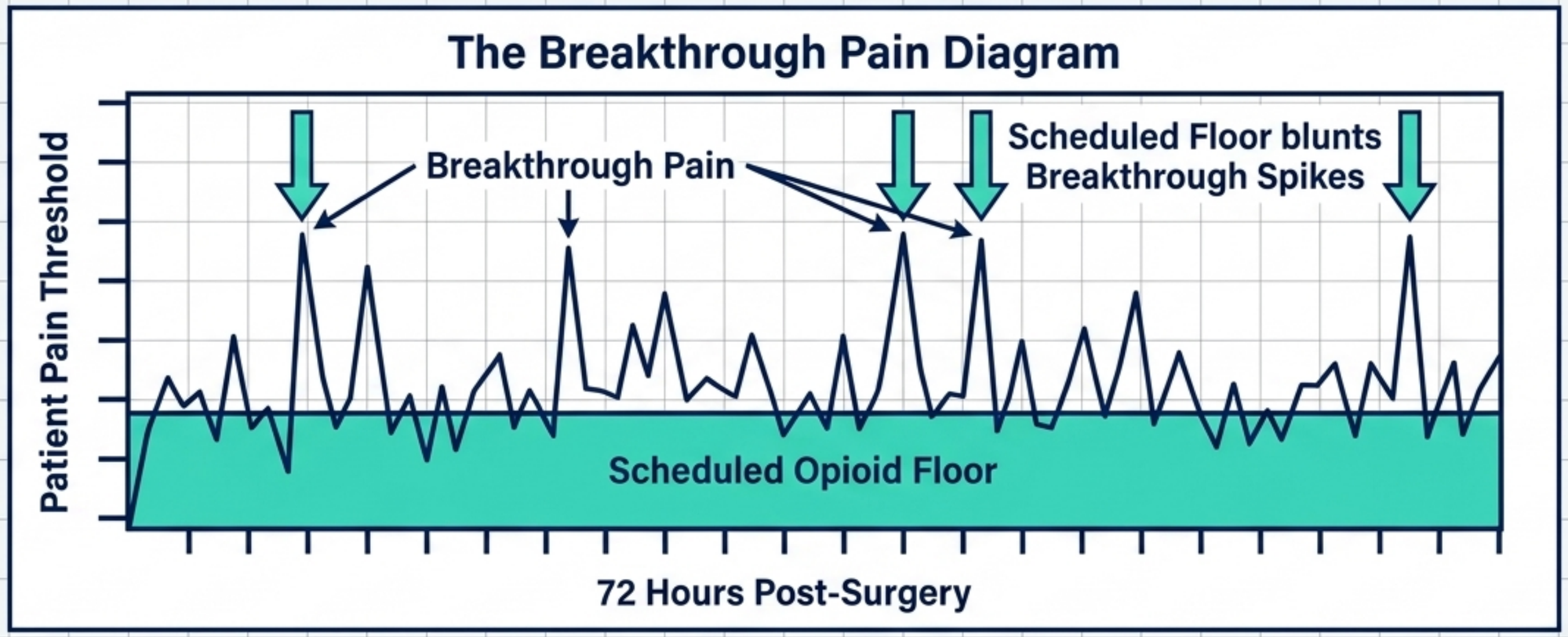


While individual doses administered immediately pre-op, intra-op, and post-op may be safe in isolation, their overlapping half-lives compound into severe adverse events. Multimodal, non-opioid base analgesia is required to lower this curve.

PHASE 4: POSTOPERATIVE

Scheduled Opioids vs. Breakthrough Pain

Moderate Recommendation



Scheduled administration without multimodal analgesia reduces breakthrough pain needs and may reduce overall post-op pain within 72 hours, reducing PCA or rescue medication usage.

PHASE 4: POSTOPERATIVE

The Perils of Scheduled Dosing

Moderate Recommendation

Despite reducing breakthrough pain, scheduled postoperative opioid administration is DISCOURAGED.

Mitigation Rules

- **Rule 1:** Avoid Extended-Release Opioids entirely to mitigate profound sedation and respiratory depression.
- **Rule 2:** Strictly monitor cumulative doses and timing, factoring in overlapping half-lives.
- **Rule 3:** Prescribe ONLY the lowest clinically effective dose.

SYNTHESIS

The Perioperative Opioid Matrix

	Impact on 72h Pain	Impact on Consumption	Risk of Compounding	Guideline Stance
Immediate Pre-Op	Reduces	Reduces	High (Sedation)	Strongly noted for benefit
Intraoperative	No Effect	Reduces	High (Sedation)	Questionable utility
Postoperative (Scheduled)	May Reduce	Reduces Breakthrough	High (Sedation)	Discouraged; lowest dose only

PHASE 5: DISCHARGE

The 30 vs. 90 Pill Dilemma

Moderate Recommendation

The 90-Pill Prescription

73 Unused Pills (Median)

Independently associated with patients taking more opioids.

The 30-Pill Prescription

15 Unused Pills (Median)

Equivalent Patient Reported Outcomes. Equivalent Pain Relief.
Massive reduction in diversion risk. Prescribe the absolute minimum quantity required.

PHASE 5: DISCHARGE

Moderate Recommendation

The Tramadol Spectrum

Efficacy Spectrum

Placebo — Traditional Opioids

Superior to Placebo: Reduces pain and consumption within 24-72 hours.

Warning Callout

Adverse Events Specifically Linked to Tramadol

- Elevated rates of Dizziness
- Increased instances of Dry Mouth
- Elevated rates of Nausea

Inconclusive / Mixed: Data lacks definitive proof of superiority or improved safety over traditional opioids.

Conclusion: Tramadol is not a panacea; it carries distinct side effects and lacks definitive proof of superiority in modern protocols.

SYNTHESIS
The Opioid Master Protocol

Foundational Rule: Opioids must be a targeted rescue tool within a comprehensive, non-opioid Multimodal Analgesia protocol—not the default baseline.

Pre-Operative Mandate

Require >50% reduction in consumption for chronic users prior to surgery.

Pre, Intra, and Post-op

- Limit overlapping half-lives (stacking).
- Avoid intra-op administration for early pain control.
- Discourage scheduled post-op opioids; use lowest effective dose.
- **NEVER** use extended-release formulations.

Discharge & Transition

- Maximize prescription at 30 pills (OxyIR).
- Monitor Tramadol for specific dizziness/dry mouth profiles.

THE NEXT FRONTIER

Advancing Multimodal Analgesia

1. Modern Multimodal Integration

Determining the exact route, dose, and frequency of opioids when layered over modern non-opioid multimodal anesthesia protocols.

2. Systemic Pre-Op Reduction

Developing innovative, scalable pathways to successfully wean chronic users before they reach the operating room.

3. Tramadol Standardization

Clarifying the optimal formulation (immediate vs. extended), dosage, and safety profile of oral Tramadol vs. traditional opioids.

The 2020 Guidelines provide the blueprint; future research will build the house.