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Research Paper

Preoperative Medication Management: Drugs to Avoid, Continue, or Modify Before oral surgical procedure

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ABSTRACT

Background: Preoperative medication management is a fundamental component of safe dental and oral surgical practice. The increasing prevalence of chronic systemic diseases and widespread use of prescription medications, over-the-counter drugs, herbal supplements, and complementary therapies have significantly increased the complexity of perioperative care. Several medications can influence bleeding, anesthesia, wound healing, osseointegration, and postoperative recovery, making careful medication assessment essential before surgical intervention. **Objective:** This comprehensive review aims to summarize current evidence regarding medications that should be continued, modified, or temporarily withheld before dental and oral surgical procedures, with emphasis on recent guideline recommendations (2023–2026) and evidence-based perioperative management strategies. **Methods:** A narrative review of contemporary literature, clinical practice guidelines, and recent evidence published between 2023 and 2026 was performed. The review focuses on principles of preoperative patient assessment, medication reconciliation, risk stratification, classification of medications according to perioperative management, and the clinical implications of commonly prescribed medications on surgical outcomes. **Results:** Appropriate perioperative medication management requires individualized assessment of bleeding risk, thromboembolic risk, cardiovascular and metabolic status, anesthetic considerations, and procedure-related factors. Most chronic medications can be safely continued, whereas selected agents—including anticoagulants, antiplatelet drugs, NSAIDs, certain antidiabetic medications, ACE inhibitors/ARBs, and herbal supplements—may require temporary discontinuation or dose modification depending on the planned procedure and patient-specific risks. Recent evidence supports multidisciplinary decision-making, comprehensive medication reconciliation, and risk-based management rather than routine discontinuation of medications. **Conclusion:** Evidence-based perioperative medication management is essential for minimizing complications and improving

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surgical outcomes in dental practice. Individualized treatment planning, adherence to contemporary clinical guidelines, and effective collaboration between dental surgeons and physicians contribute to safer surgical care, improved wound healing, and enhanced patient outcomes

INTRODUCTION

Successful surgical outcomes in dentistry depend not only on the clinician's technical expertise but also on comprehensive preoperative patient assessment. Among the various components of preoperative evaluation, medication reconciliation plays a pivotal role in minimizing perioperative complications and optimizing postoperative healing. With the increasing prevalence of chronic systemic diseases and an aging population, a growing number of patients presenting for dental and oral surgical procedures are receiving long-term pharmacotherapy for cardiovascular disorders, diabetes mellitus, osteoporosis, autoimmune diseases, psychiatric illnesses, and other chronic medical conditions. In addition, the widespread use of over-the-counter medications, herbal supplements, and complementary therapies has further increased the complexity of perioperative medication management.

Dental and oral surgical procedures, particularly dental implant placement, periodontal surgery, bone grafting, and other invasive interventions, require meticulous control of hemostasis, preservation of tissue integrity, and predictable wound healing to achieve favorable clinical outcomes. Numerous medications have the potential to influence these biological processes by altering platelet function, coagulation pathways, inflammatory responses, immune function, bone metabolism, and soft tissue repair. Consequently, inappropriate perioperative medication management may increase the risk of excessive bleeding, impaired osseointegration, delayed wound healing, postoperative infection, medication-related osteonecrosis of the jaw (MRONJ), and adverse interactions with local

anesthetics, sedatives, analgesics, and antimicrobial agents.

Importantly, discontinuation of medications before surgery should not be considered routine practice. While certain medications may require temporary interruption, dose modification, or substitution to reduce perioperative risks, many essential therapies should be continued to prevent serious medical complications. The decision to continue, modify, or withhold a medication should always be individualized after careful evaluation of the patient's systemic condition, the pharmacological characteristics of the drug, the planned surgical procedure, and the balance between thromboembolic, cardiovascular, metabolic, and bleeding risks. Whenever appropriate, close collaboration among the dental surgeon, primary care physician, cardiologist, endocrinologist, or other relevant healthcare professionals is recommended to ensure optimal patient care.

Several factors justify the need for careful preoperative medication assessment. Certain drugs, particularly anticoagulants, antiplatelet agents, and non-steroidal anti-inflammatory drugs (NSAIDs), may increase intraoperative and postoperative bleeding by impairing normal hemostatic mechanisms. Other medications can alter the pharmacodynamic or pharmacokinetic properties of anesthetic agents, thereby affecting anesthetic efficacy, cardiovascular stability, or recovery. Medications influencing renal and hepatic function may interfere with the metabolism and elimination of anesthetic and analgesic agents, increasing the risk of drug toxicity. Likewise, patients receiving antidiabetic medications require individualized perioperative glycemic management to minimize the risks of hypoglycemia, hyperglycemia, and delayed wound healing. Furthermore, several medications and herbal supplements may impair bone remodeling and osseointegration, compromise



immune responses, or increase susceptibility to postoperative infections, ultimately affecting the long-term success of dental implant therapy.

A thorough medication history should therefore include all prescribed medications, over-the-counter drugs, herbal products, nutritional supplements, and recreational substance use. Such comprehensive medication reconciliation enables clinicians to identify potential drug interactions, anticipate perioperative complications, implement appropriate preventive measures, and develop individualized treatment strategies that enhance patient safety and surgical success.

The purpose of this comprehensive review is to summarize current evidence regarding medications that should be continued, modified, or temporarily withheld before dental and oral surgical procedures. Emphasis is placed on the pharmacological mechanisms underlying perioperative risks, the effects of commonly prescribed medications on bleeding, anesthesia, wound healing, bone regeneration, and osseointegration, as well as contemporary evidence-based recommendations and recent clinical guidance relevant to safe perioperative medication management in dental practice.

2 Principles of Preoperative Patient and Medication Assessment

Comprehensive preoperative assessment is a fundamental component of safe dental and oral surgical practice. (1) Its primary purpose is to identify patient-specific risk factors, evaluate systemic health and current medications, optimize existing medical conditions, and develop an individualized treatment plan that minimizes perioperative complications while improving surgical outcomes. Careful assessment also facilitates effective communication among the dental team and other healthcare professionals involved in patient care.(2)

2.1 Assessment of Decision-Making Capacity

Valid informed consent requires that the patient possesses adequate decision-making capacity. This is generally assessed using four essential criteria:

1. **Ability to communicate a treatment choice** clearly and consistently.
2. **Understanding of relevant information**, including the diagnosis, proposed treatment, benefits, risks, and available alternatives.
3. **Appreciation of the medical condition** and the likely outcomes of the proposed treatment.
4. **Reasoning ability**, enabling the patient to compare treatment options and make a rational, informed decision.

2.2 Rationale for Preoperative Assessment

A thorough preoperative assessment enables clinicians to:

- Identify pre-existing medical conditions and comorbidities.
- Review prescription medications, over-the-counter drugs, and herbal supplements.
- Optimize systemic diseases before surgery.
- Confirm the suitability of the planned procedure.
- Assess the risk of bleeding, infection, drug interactions, and delayed wound or bone healing.
- Plan appropriate perioperative medication management and preventive measures.
- Coordinate care with physicians or specialists when necessary.
- Prepare the required facilities, equipment, and emergency protocols.
- Anticipate potential complications and counsel patients regarding perioperative instructions and postoperative care.

A systematic preoperative assessment promotes individualized, evidence-based care and



significantly enhances patient safety, surgical success, and postoperative recovery.(3,4)

3 Medication Reconciliation

Medication reconciliation is a systematic process of obtaining, verifying, and documenting a complete and accurate list of all medications a patient is currently taking before undergoing a surgical procedure. The primary objective is to identify potential medication-related risks, prevent adverse drug events, and ensure safe perioperative management.

A comprehensive medication history should include all prescription medications, over-the-counter (OTC) drugs, herbal and dietary supplements, vitamins, and recreational substances. Important details such as the drug name, dose, route of administration, frequency, duration of use, indication, recent changes,

allergies, and previous adverse drug reactions should also be documented.

During medication reconciliation, clinicians should identify medications that require continuation, temporary discontinuation, dose modification, or substitution based on the patient's medical condition, the planned surgical procedure, and the associated risks of bleeding, thromboembolism, impaired wound healing, drug interactions, or anesthetic complications. Whenever uncertainty exists, consultation with the patient's physician or relevant medical specialist is recommended to ensure individualized and evidence-based perioperative care.

Accurate medication reconciliation is a key component of patient safety, reducing medication errors, preventing avoidable complications, and improving surgical outcomes in dental and oral surgical practice.(5,6)

Table 1. Components of Medication Reconciliation

Component	Details to Record
Prescription medications	Name, dose, frequency, indication
OTC medications	NSAIDs, analgesics, antacids, etc.
Herbal supplements	Garlic, Ginkgo, Ginseng, Turmeric, etc.
Vitamins & supplements	Vitamin D, Calcium, Iron, Omega-3
Drug allergies	Medication and type of reaction
Previous adverse drug reactions	Severity and management
Recreational substances	Tobacco, alcohol, cannabis, illicit drugs

4 Risk Stratification

Risk stratification is an essential component of preoperative assessment that involves evaluating patient-related and procedure-related factors to identify the risk of perioperative complications. It facilitates individualized treatment planning, enhances patient safety, and supports evidence-based clinical decision-making.

The following factors should be considered during preoperative evaluation:

- **Bleeding Risk:** Assess bleeding disorders, anticoagulant or antiplatelet therapy, liver disease, thrombocytopenia, and the expected surgical bleeding.
- **Thromboembolic Risk:** Evaluate the risk of stroke, venous thromboembolism, or other thrombotic events before interrupting anticoagulant therapy.



- **Cardiovascular Risk:** Review hypertension, ischemic heart disease, heart failure, arrhythmias, implanted cardiac devices, and overall cardiovascular status.
- **Metabolic Risk:** Assess glycemic control in diabetic patients and evaluate renal and hepatic function, as these may affect drug metabolism and perioperative management.
- **Infection and Wound Healing Risk:** Identify factors such as uncontrolled diabetes, immunosuppression, smoking, malnutrition, previous radiotherapy, and osteoporosis medications that may impair healing.
- **Anesthetic Risk:** Review previous anesthetic complications, allergies, airway assessment, and medications that may interact with anesthetic agents.

Appropriate risk stratification enables clinicians to optimize perioperative medication management, anticipate potential complications, and improve surgical outcomes in dental and oral surgical practice.

Table 2. Components of Preoperative Risk Stratification

Risk Category	Factors to Assess	Potential Impact
Bleeding Risk	Anticoagulants, thrombocytopenia, liver disease	Excessive bleeding
Thromboembolic Risk	Atrial fibrillation, prosthetic valves, previous stroke/VTE	Stroke or thromboembolism
Cardiovascular Risk	Hypertension, ischemic heart disease, heart failure	Cardiac complications
Metabolic Risk	Diabetes, renal and hepatic disease	Poor glycemic control, altered drug metabolism
Infection & Healing Risk	Smoking, immunosuppression, osteoporosis drugs	Delayed healing, infection, impaired osseointegration
Anesthetic Risk	Previous reactions, allergies, airway assessment	Anesthetic complications

5 Classification of Medications Based on Perioperative Management

Successful perioperative medication management requires careful evaluation of the benefits and risks associated with continuing, modifying, or temporarily discontinuing medications before dental and oral surgical procedures. The decision should be individualized according to the patient's systemic health, indication for the medication, pharmacological profile, and the complexity of the planned surgical procedure. The primary objective

is to minimize perioperative complications such as excessive bleeding, thromboembolic events, adverse drug interactions, impaired wound healing, delayed osseointegration, infection, and anesthetic complications while ensuring optimal patient safety.

For practical clinical application, medications can be broadly classified into four categories according to their perioperative management.

I. Medications Temporarily Withheld Before Surgery



Knowing which medications to avoid before surgery is essential for ensuring a safe and successful operation.

You should always talk openly with your healthcare provider about all the medications and supplements you're taking. If you're on a lot of medication, it may be worth making a list to make sure you don't miss anything off. Your healthcare provider will give you specific instructions on what to stop and what you can continue to take. In the meantime, here are some general guidelines:

1. Blood thinners

Common medications: Aspirin, Warfarin, Clopidogrel, Heparin, Prasugrel, Ticagrelor and newer anticoagulants(7-9)

Why to avoid: Blood thinners can increase the risk of excessive bleeding during and after surgery. While they're great for preventing clots in everyday life, they're not so great when you're about to have a procedure that needs precise blood control. Aspirin can sometimes be taken before surgery, but always ask your healthcare provider before doing so.(10,11)

2. Non-steroidal Anti-Inflammatory Drugs (NSAIDs)

Common medications: Ibuprofen, Naproxen, Diclofenac.

Why to avoid: NSAIDs can thin your blood too, making you bleed more. They can also interfere with your kidney function. NSAIDs are best avoided if you are undergoing neuro, spinal, cardiac, or orthopaedic surgery.(16,17)

3. Herbal supplements

Common supplements: Ginkgo Biloba, Garlic, Ginseng, St. John's Wort, Echinacea.

Why to avoid: Herbal supplements can interfere with anaesthesia and other meds used during surgery. Some can increase bleeding risk or mess with your blood pressure and heart rate. It's best to

stop taking these at least two weeks before surgery (3) but always check with your doctor or surgeon first.

4. Certain antidepressants

Common medications: MAOIs (Monoamine Oxidase Inhibitors) like Phenelzine and Tranylcypromine.

Why to avoid: MAOIs can negatively affect anaesthesia and other surgery meds. This can lead to dangerous spikes in blood pressure or other issues.

5. Diabetes medications

Common medications: Insulin, Metformin, and other oral hypoglycemic agents.

Why to avoid: These meds affect your blood sugar levels, which need to be stable during surgery. Your doctor might tweak your dosage or timing. Diabetic patients will be given specific advice.(12-15)

6. ACE inhibitors and ARBs

Common medications: Lisinopril, Ramipril, Enalapril, Perindopril, Captopril, Fosinopril, Trandolapril

Why to avoid: These meds can sometimes cause a drop in blood pressure when combined with anaesthesia. This can lead to complications. Importantly, medications should **never be discontinued without appropriate medical advice**, as unnecessary interruption may increase the risk of serious systemic complications.

II. Medications Generally Continued Before Surgery

We've looked at the medications you may need to avoid before surgery, now it's time for those considered to be safe. The information below is general guidance on medication you can continue to take but remember – always consult with your healthcare provider for personalised advice.



1. Blood pressure medications

Common medications: Beta-blockers (e.g., Metoprolol, Atenolol) and Calcium channel blockers (e.g., Amlodipine, Diltiazem).

Why you can take them: Managing your blood pressure is crucial, even before surgery. These medications help keep your blood pressure stable, which is important for a safe surgical procedure.

2. Thyroid medications before surgery

Common medications: Levothyroxine, Carbimazole.

Why you can take them: Thyroid hormones are essential for maintaining your body's metabolism. Continuing to take these medications helps avoid fluctuations in your hormone levels, which can complicate surgery and recovery.

3. Asthma medications

Common medications: Inhalers and Steroids.

Why you can take them: Keeping your airways open and reducing inflammation is vital, especially during surgery when you need optimal lung function. Continue using your prescribed inhalers and steroids unless advised otherwise by your doctor.

4. Anti-seizure medications

Common medications: Phenytoin, Levetiracetam, Sodium valproate.

Why you can take them: Maintaining control over seizures is crucial. Stopping these medications can increase the risk of a seizure. This can be particularly dangerous during surgery.

5. Pain medications before surgery

Common Medications: Codeine/co-codamol (Zapain), tramadol, morphine (MST, Zomorph), oxycodone (Longtec/Shortec), buprenorphine patches, paracetamol

Why you can take them: Unlike NSAIDs, opiates don't affect blood clotting and are generally safe to take for pain relief leading up to surgery.

Always confirm with your doctor, as your specific condition may have different requirements.

6. Antidepressants

Common medications: SSRIs (e.g., Sertraline), SNRIs (e.g., Venlafaxine).

Why you can take them: Mental health is just as important as physical health. Most antidepressants are safe to continue before surgery. Always check with your team, especially if you're taking Monoamine Oxidase Inhibitors (MAOIs).

III. Medications Requiring Dose Modification or Individualized Assessment

Certain medications require careful perioperative evaluation because their continuation or discontinuation depends on the patient's medical condition, surgical bleeding risk, and the potential consequences of interrupting therapy.

This group includes:

- Anticoagulants (Warfarin, Apixaban, Rivaroxaban, Dabigatran)
- Antiplatelet agents (Aspirin, Clopidogrel, Ticagrelor, Prasugrel)
- Insulin and oral antidiabetic medications
- ACE inhibitors
- Angiotensin receptor blockers (ARBs)
- Corticosteroids
- Selected antidepressants

Management decisions should be individualized after assessing bleeding risk, thromboembolic risk, glycemic control, cardiovascular status, and the type of planned dental procedure. When necessary, consultation with the patient's physician or relevant medical specialist is recommended before modifying therapy.

IV. Medications Used as Part of Preoperative Management

Several medications are intentionally administered before dental surgery to reduce perioperative complications and improve patient comfort.



These include:

- **Sedatives:** these may be given to help you relax. This can [help reduce anxiety before surgery](#) and make you feel more comfortable
- **Antibiotics:** to prevent infections, you might receive an antibiotic through your IV. This is typically given shortly before surgery begins
- **Antiemetics:** these are medications to prevent nausea and vomiting, especially if you're prone to motion sickness or have had issues with anaesthesia in the past
- **Blood pressure medications:** If you take blood pressure medication, you might be instructed to take it on the morning of surgery, depending on your doctor's guidance.

6 General Principles for Medication Management

Your journey to the operating room starts with a pre-operative consultation. This is an important meeting where you'll discuss your health history, current medications, and any concerns you may have with your surgeon and / or healthcare team. You'll receive detailed guidance on which medications to continue and which to stop in the weeks before your surgery.

Your healthcare team may ask you to follow an NBM (Nil-by-Mouth) policy. This means you should not eat or drink for a certain period [while preparing for surgery](#).

- **Fasting guidelines:** usually, you'll be asked to stop eating and drinking at least 6-8 hours before surgery
- **Clear liquids:** in some cases, you may be allowed to drink clear liquids (such as water or black coffee) up to a few hours before surgery
- **Medication with water:** if you need to take essential medication during this fasting period, you can usually do so with a small sip of water, but only if your doctor approves.

This meeting is the perfect time to ask any questions about the surgery, the anaesthesia, and the recovery process.

Medication given during surgery

Once in the operating room, the surgical team will administer several medications to ensure your procedure goes smoothly.

- **Anaesthesia:** the anaesthetist will administer anaesthesia, which may be general (putting you to sleep), regional (numbing a large area of your body), or local (numbing a small area). This ensures you don't feel any pain during surgery
- **Muscle relaxants:** If necessary, muscle relaxants might be given to ensure your muscles are completely relaxed during the procedure
- **Pain management:** Depending on the surgery, additional pain relief medication might be given to keep you comfortable.

Medication given after surgery

After the surgery, you'll be given medications to help with recovery and to help manage any discomfort.

- 1 **Pain relief:** Once you're in the recovery room, you'll receive pain relief medications. This will be either through an IV or orally
- 2 **Antibiotics:** If there's a risk of infection, you might continue to receive antibiotics after surgery to prevent complications
- 3 **Antiemetics:** To prevent postoperative nausea, you may be given antiemetic medications. You're more likely to be given this if you received general anaesthesia
- **Blood thinners:** Depending on the type of surgery, blood thinners might be prescribed to prevent blood clots during your recovery. (18-23)

7 Lifestyle Factors Influencing Perioperative Outcomes



Although not classified as medications, tobacco use, alcohol consumption, and recreational drug use significantly influence surgical outcomes.

Nicotine impairs angiogenesis and bone healing, alcohol may interact with anesthetic and analgesic agents, and recreational drugs can alter cardiovascular responses and anesthetic requirements. Patients should be encouraged to discontinue or minimize these substances before surgery and disclose their use during the preoperative evaluation.

8 Recent Evidence and Guideline Recommendations (2023–2026)

1. Anticoagulants and Antiplatelet Therapy

Recent Recommendation

Current evidence suggests that **routine discontinuation of anticoagulants or antiplatelet agents before most minor dental procedures is generally unnecessary**. Bleeding can usually be managed effectively with local hemostatic measures, whereas interruption of therapy may substantially increase the risk of thromboembolic complications.

Clinical Recommendation

- Continue therapy for most minor dental procedures.
- Assess both bleeding risk and thromboembolic risk individually.
- Consult the patient's physician for high-risk patients or major oral surgical procedures.

2. Direct Oral Anticoagulants (DOACs)

Recent reviews recommend **individualized management** rather than routine discontinuation. For procedures with minimal bleeding risk, interruption is often unnecessary; for higher-risk procedures, timing of the last dose depends on renal function and procedural bleeding risk.

Clinical Recommendation

- Consider renal function.
- Evaluate procedural bleeding risk.
- Avoid unnecessary heparin bridging in most dental procedures.

3. Diabetes Medications

The **2023 Centre for Perioperative Care (CPOC)** guideline emphasizes optimization of glycemic control before surgery and individualized adjustment of insulin and oral hypoglycemic agents.

Clinical Recommendation

- Optimize HbA1c and blood glucose preoperatively.
- Individualize insulin dosing.
- Monitor perioperative blood glucose.

4. SGLT2 Inhibitors

One of the most important updates from recent perioperative guidance concerns **SGLT2 inhibitors** (e.g., empagliflozin, dapagliflozin), which have been associated with **euglycemic diabetic ketoacidosis (eDKA)** during the perioperative period. Recent recommendations support withholding these medications several days before surgery.

Clinical Recommendation

- Identify patients taking SGLT2 inhibitors during medication reconciliation.
- Follow current perioperative guidance regarding temporary discontinuation.
- Resume only when the patient is clinically stable and eating normally.

5. GLP-1 Receptor Agonists

Recent multidisciplinary guidance (2025) highlights concerns regarding delayed gastric emptying and aspiration risk during anesthesia or deep sedation. Management should be individualized according to the patient's risk profile and the planned procedure.



Clinical Recommendation

- Review GLP-1 receptor agonist use during the preoperative assessment.
- Coordinate management with the anesthesiologist and treating physician when sedation or general anesthesia is planned.

6. Herbal Supplements

Recent perioperative recommendations continue to advise careful documentation of herbal supplement use because products such as **garlic, ginkgo biloba, ginseng, turmeric, and fish oil** may increase bleeding risk or interact with anesthetic drugs.

Clinical Recommendation

- Obtain a complete supplement history.
- Consider temporary discontinuation before surgery according to current institutional protocols.

7. Medication Reconciliation

Recent perioperative guidance emphasizes that **medication reconciliation is a patient safety priority**. Every patient should have a complete review of prescription drugs, over-the-counter medications, herbal products, and dietary supplements before surgery.

Clinical Recommendation

- Verify all medications.
- Document allergies and adverse drug reactions.
- Identify medications requiring continuation, modification, or temporary interruption.

8. General Principle of Perioperative Medication Management

Modern perioperative recommendations emphasize that medication management should be **patient-centered and risk-based**, balancing:

- Bleeding risk
- Thromboembolic risk

- Surgical complexity
- Comorbidities
- Drug interactions
- Type of anesthesia

Abrupt discontinuation of chronic medications should generally be avoided unless there is a clear clinical indication.(24-26)

Current Guideline Highlights (2023–2026)

- Routine discontinuation of anticoagulants before most minor dental procedures is generally not recommended.
- SGLT2 inhibitors require specific perioperative consideration because of the risk of euglycemic ketoacidosis.
- Medication reconciliation should include prescription drugs, OTC medications, and herbal supplements.
- Perioperative medication decisions should be individualized based on bleeding risk, thromboembolic risk, and procedural complexity.

CONCLUSION

Preoperative medication management represents a cornerstone of safe and successful dental and oral surgical practice. With the growing number of medically compromised patients receiving long-term pharmacotherapy, clinicians must carefully evaluate the potential effects of medications on bleeding, hemostasis, anesthesia, bone metabolism, wound healing, and postoperative recovery. Comprehensive preoperative assessment, medication reconciliation, and risk stratification enable clinicians to identify patients at increased risk of perioperative complications and facilitate individualized treatment planning. Current evidence emphasizes that routine discontinuation of chronic medications is often unnecessary and may expose patients to significant thromboembolic, cardiovascular, or metabolic complications. Instead, perioperative medication



management should be guided by a balanced assessment of patient-specific risk factors, pharmacological characteristics, procedural complexity, and the latest evidence-based recommendations.

Recent guideline updates (2023–2026) advocate individualized, patient-centered decision-making, particularly for anticoagulants, antiplatelet agents, direct oral anticoagulants, antidiabetic medications, and herbal supplements. The incorporation of contemporary evidence into clinical practice can reduce perioperative morbidity while preserving the therapeutic benefits of essential medications.

Future research should focus on developing procedure-specific protocols for dental and oral surgery, strengthening the evidence base for emerging pharmacological agents, and promoting standardized international guidelines for perioperative medication management. Ultimately, an evidence-based, multidisciplinary approach remains fundamental to improving patient safety, optimizing surgical outcomes, and ensuring high-quality perioperative care in modern dental practice.

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