BEYOND THE FASTING CLOCK:

Gastric PoCUS & GLP-1 Perioperative Risk Assessment

Abstract:

The increasing use of glucagon-like peptide-1 (GLP-1) therapies, including unprescribed and unregulated use, has important implications for perioperative care. By delaying gastric emptying, GLP-1 receptor agonists may increase residual gastric contents and the risk of pulmonary aspiration under general anaesthesia.[1,2] The 2025 ADS/ANZCA/GESA/NACOS joint recommendations advise against routine medication withholding and note the prolonged elimination half-lives of these agents and the potential risk of rebound hyperglycaemia. Current recommendations support preprocedural dietary modification, with gastric point-of-care ultrasound (PoCUS) used where indicated to assess gastric contents beyond the fasting history.[3,4] This narrative review examines gastric PoCUS assessment, antral cross-sectional area measurement, airway management considerations, prokinetic therapy, rescheduling criteria, and the potential contribution of Anaesthetic Technicians. Anaesthetic Technicians can contribute by preparing ultrasound equipment, assisting with patient positioning and image acquisition, and anticipating equipment requirements when aspiration precautions are needed.

Keywords:

GLP-1 receptor agonists; Gastric point-of-care ultrasound; Perioperative fasting; Aspiration risk; Anaesthetic Technicians; Gastric emptying; Prokinetics; Computer-assisted ultrasound; Perioperative assessment

Evidence Gaps and Research Priorities:

High-quality perioperative evidence on GLP-1-related gastric retention remains limited.[5,6,7] Current evidence shows increased residual gastric contents more consistently than an increased incidence of pulmonary aspiration.[8,9] A systematic review and meta-analysis also found increased residual gastric contents despite adherence to fasting guidelines.[10] Large surgical cohorts have not shown a clear increase in aspiration-related outcomes.[6,11] Similar findings have been reported in upper gastrointestinal endoscopy and fast-track joint surgery.[12,13]

While intravenous erythromycin is an established prokinetic agent in emergency gastrointestinal management, its timing, dosage, and effectiveness for GLP-1-induced gastric retention before surgery remain uncertain.[14,15] Endoscopy evidence suggests that prolonged clear-fluid preparation may reduce retained gastric contents, although its effect alone remains uncertain.[16] Important areas for further study include 24-hour clear-fluid protocols, gastric PoCUS training for Anaesthetic Technicians, prokinetic therapy for retained gastric contents, and computer-assisted gastric ultrasound.

[1] Sen, S., et al. (2024). Glucagon-like peptide-1 receptor agonist use and residual gastric content before anesthesia. JAMA Surgery, 159(6), 660–667.
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[3] Hocking, S.L., et al. (2025). 2025 ADS/ANZCA/GESA/NACOS recommendations on peri-procedural GLP-1/GIP receptor agonists. Anaesthesia and Intensive Care, 53(5), 300–306.
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[8] Elkin, J., et al. (2025). GLP-1 receptor agonist use and peri-operative pulmonary aspiration: systematic review and meta-analysis. Anaesthesia, 80(7), 846–858.
[9] Adalier, E., et al. (2026). Perioperative aspiration-related outcomes with GLP-1 receptor agonists: a systematic review. Trends in Anaesthesia and Critical Care, 68, 101660.
[10] Hiramoto B, et al. The impact of glucagon-like peptide-1 receptor agonists in patients undergoing anesthesia or sedation: systematic review and meta-analysis. Perioper Medicine 2024;13:59.
[11] Wright, J.D., et al. (2025). GLP-1 receptor agonist use and pulmonary aspiration in surgical patients. Journal of Clinical Anesthesia, 104, 111816.
[12] Alkabbani W, et al. GLP-1 receptor agonists before upper GI endoscopy and risk of pulmonary aspiration. BMJ. 2024;387:e080340.
[13] Mahmoud LI, et al. Perioperative GLP-1 RA management and aspiration risk in fast-track hip and knee arthroplasty. Dan Med J. 2025;72(5):A09240629.
[14] Janssens J, et al. Improvement of gastric emptying in diabetic gastroparesis by erythromycin. Preliminary studies. N Engl J Med. 1990;322(15):1028–31.
[15] Sidhu NS. Gastric ultrasound and erythromycin efficacy in a patient taking GLP-1 receptor agonists. Anaesth Rep. 2025;13(1):e70008.
[16] Tarar, Z.I., et al. (2025). Safety of GI endoscopy in patients on GLP-1 receptor agonists: systematic review and meta-analysis. Diagnostics, 15(6), 770.

Introduction:

The increasing use of glucagon-like peptide-1 (GLP-1) therapies, including unprescribed and unregulated use, has important implications for perioperative care. Traditional fasting intervals of 6 hours for solids and 2 hours for clear fluids under ANZCA PG07 may not ensure an empty stomach in patients taking GLP-1 receptor agonists.[2,17] Current recommendations support a 24-hour clear-fluid diet before procedures, with gastric PoCUS used when indicated to assess gastric contents.[3] This also creates a potential role for Anaesthetic Technicians in supporting gastric assessment and perioperative preparation.

PART 1: CLINICAL AND LIFESTYLE CONSIDERATIONS

To help manage gastrointestinal symptoms and support patients receiving GLP-1 RA therapy, the following measures may be considered.[18,19,20]

1. **Dose titration:** Start at the lowest dose and delay dose escalation if gastrointestinal side effects persist.[18]
2. **Protein intake:** Prioritise lean protein intake (1.2–1.6 g/kg/day) to help preserve muscle mass during weight loss associated with GLP-1-based therapy.[19,21,22,23]
3. **Portion control:** Reduce meal portions and stop eating before feeling overly full to limit gastric distension.[18]
4. **Hydration:** Aim for more than 2 L of fluid daily to reduce the risk of dehydration and constipation.[18]
5. **Dietary modification:** Avoid high-fat and fried foods that may further delay gastric emptying.[18]
6. **Fibre intake:** Introduce psyllium or oats progressively alongside hydration to reduce constipation.[18]
7. **Progressive resistance training:** Resistance exercise 2 to 3 times per week may help maintain muscle mass.[19,24]
8. **Post-meal positioning:** Remain upright for 30 to 60 minutes after eating to support gastric emptying and reduce reflux symptoms.[18]
9. **Management of gastrointestinal symptoms:** Short-term antiemetics, such as ondansetron, or osmotic laxatives may be used to manage symptoms during dose escalation.[18]
10. **Periprocedural dietary modification:** Use a 24-hour clear-fluid diet before procedures in accordance with current ADS/ANZCA recommendations.[3]

These measures may help reduce gastrointestinal symptoms and support patients during GLP-1 RA therapy, but they do not reliably confirm gastric emptying before anaesthesia. Perioperative assessment must therefore consider fasting history, current symptoms, medication use, and the possibility of retained gastric contents despite standard preparation.

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[21] Neeland IJ, Linge J, Birkenfeld AL. Changes in lean body mass with glucagon-like peptide-1-based therapies and mitigation strategies. Diabetes Obes Metab. 2024;26(Suppl 4):16–27.
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[24] Locatelli JC, et al. Incretin-based weight loss pharmacotherapy: can resistance exercise optimize changes in body composition? Diabetes Care. 2024;47(10):1718–30.

PART 2: PERIOPERATIVE MANAGEMENT & PATHOPHYSIOLOGY

1. Delayed Gastric Emptying and Aspiration Risk

Delayed gastric emptying associated with GLP-1 RAs may result in retained gastric contents despite standard fasting.[2,25] Perioperative regurgitation and aspiration have been reported in patients taking GLP-1 RAs,[26,27] although larger reviews have not consistently demonstrated an increased incidence of pulmonary aspiration.[5,28] Joint Australian clinical practice recommendations (ADS/ANZCA/GESA/NACOS) advise against routine preoperative drug withholding because of prolonged half-lives and the risk of worsening glycaemic control.[3] Current recommendations support preprocedural dietary modification, with gastric PoCUS used when clinically indicated to assess gastric contents and assist perioperative risk assessment.[3,29,30]

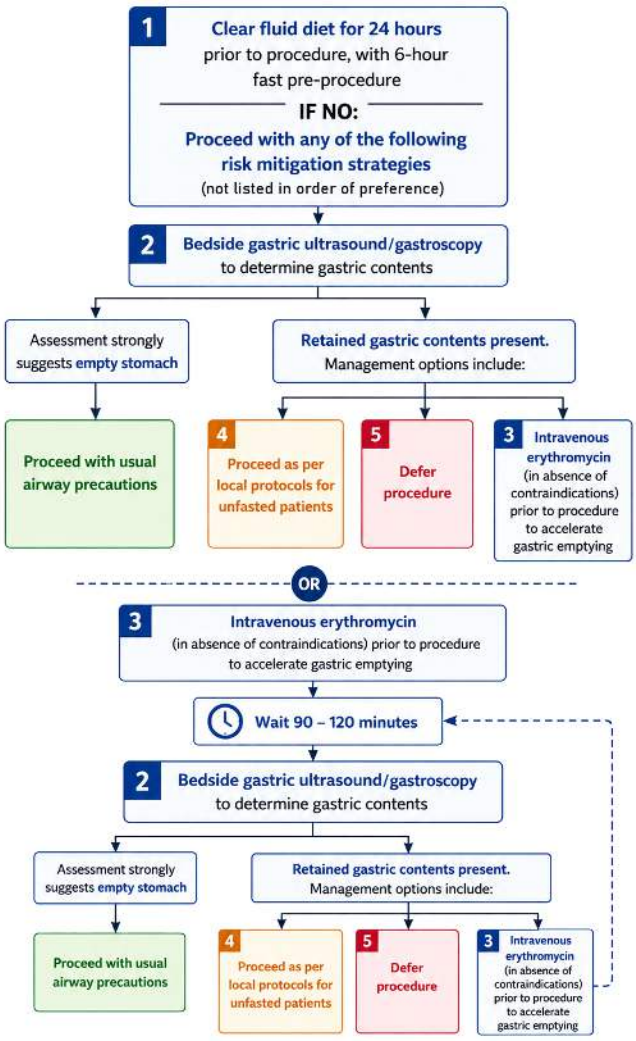
A flat antrum in the supine position does not confirm an empty stomach, as fluid may remain pooled in the fundus. Assessment in the right lateral decubitus (RLD) position allows dependent fluid to move into the antrum and improves detection of retained gastric contents. A Grade 0 stomach should therefore be confirmed in the RLD position rather than from a supine scan alone.[31,32]

2. Clinical Decision & Risk Stratification Matrix

Patient Scenario	Fasting & Dietary Status	Gastric PoCUS Finding	Risk Level	Management Considerations
Asymptomatic	Complied with 24-hour clear-fluid diet + standard 6-hour fasting	Grade 0 or clear fluid volume less than 1.5 mL/kg[31,32]	🟢 **Low**	Standard precautions; Routine general anaesthesia.
Uncertain fasting status	Non-compliant or uncertain 24-hour clear-fluid diet	Clear fluid volume greater than 1.5 mL/kg[31,32]	🟡 **Moderate**	Consider IV erythromycin (3 mg/kg, up to 250 mg) 90–120 min preoperatively, or treat as full stomach.[3,14,15]
Symptomatic	Active gastrointestinal symptoms (nausea, vomiting, distension)	Solid gastric contents *("frosted glass")*.[31,32]	🔴 **High**	Treat as full stomach. Consider RSI with tracheal intubation or defer elective surgery.[3]

[25] Vlaeminck, N., et al. (2026). Gastric ultrasound in patients receiving semaglutide: a prospective, multicentre, matched control study. Anaesthesia, 81(6), 801–809.
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[31] van de Putte P, Perlas A. Ultrasound assessment of gastric content and volume. Br J Anaesth. 2014;113(1):12–22.
[32] Perlas A, Chan VWS, Lupu CM, Mitsakakis N, Hanbidge A. Ultrasound assessment of gastric content and volume. Anesthesiology. 2009;111(1):82–89.

Figure 1. Periprocedural GLP-1 and GLP-1/GIP Receptor Agonist Decision Aid



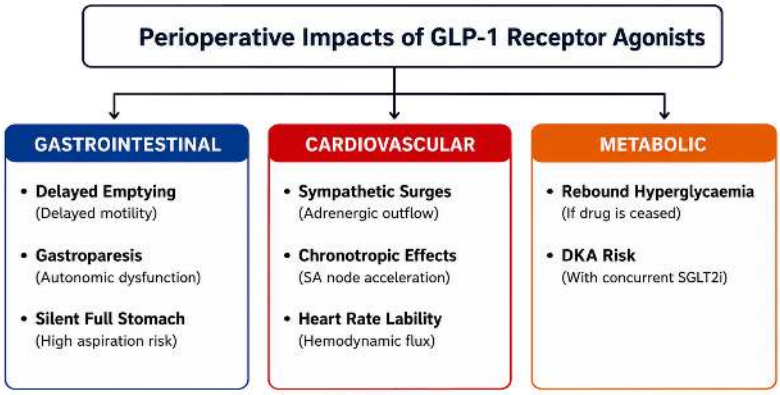
Adapted by the author from the joint consensus recommendations published by the Australian Diabetes Society (ADS), National Association of Clinical Obesity Services (NACOS), Gastroenterological Society of Australia (GESA), and Australian and New Zealand College of Anaesthetists (ANZCA) in April 2025.[3] The algorithm has been adapted for perioperative clinical use and does not replace clinical judgement or local institutional policy.

3. Australian GLP-1 RA Pharmacological Formulations

Generic Name	Common Australian Brand	Approved Indication	Elimination Half-Life
Semaglutide (Weekly)	Ozempic / Wegovy	Type 2 diabetes / obesity	Approximately 1 week.[33]
Tirzepatide (Weekly)	Mounjaro	Type 2 diabetes / obesity	Approximately 5 days.[33]
Dulaglutide (Weekly)	Trulicity	Type 2 diabetes mellitus	Approximately 5 days.[33]
Liraglutide (Daily)	Saxenda	Obesity / weight management	Approximately 13 hours.[33]

[33] Min JS, et al. A comprehensive review on the pharmacokinetics and drug-drug interactions of approved GLP-1 receptor agonists and a dual GLP-1/GIP receptor agonist. Drug Des Devel Ther. 2025;19:3509–3537.

4. Systemic Pathophysiological Impacts



SA node = sinoatrial node; SGLT2i = sodium–glucose co-transporter-2 inhibitor.

- **Gastrointestinal:** GLP-1 receptor agonists slow gastric emptying through effects on gastrointestinal motility and neural pathways, which may contribute to retained gastric contents and symptoms of delayed gastric emptying.[34,35] This effect may lessen with continued GLP-1 exposure due to tachyphylaxis, although clinically relevant delayed gastric emptying may persist in some patients.[36]
- **Cardiovascular:** GLP-1 receptor agonists can increase resting heart rate through direct effects on the sinoatrial node.[37]
- **Metabolic:** Routine cessation of GLP-1 receptor agonists is not recommended, as withholding therapy may worsen glycaemic control.[3] GLP-1 RA-associated gastric retention should also be distinguished from sodium-glucose cotransporter-2 (SGLT2) inhibitor-induced euglycaemic diabetic ketoacidosis (DKA).[38]

PART 3: IMPLICATIONS FOR ANAESTHETIC PRACTICE

Gastric PoCUS and Risk Assessment

Gastric PoCUS provides additional information when fasting status is uncertain.[3,39] Measurement of antral cross-sectional area (CSA) and use of the Perlas grading system (Grades 0 to 2) can help assess the nature and volume of gastric contents and guide airway management.[31,32] Assessment in the right lateral decubitus (RLD) position improves visualisation of dependent gastric contents and allows more reliable measurement of the antrum.[31,32]

Qualitative assessment can further distinguish an empty stomach from clear fluid or solid gastric contents.[31,32] When fluid is present, antral CSA can be incorporated into validated models to estimate gastric volume.[31,32,40]

[34] Jensterle, M., et al. (2023). Semaglutide delays 4-hour gastric emptying in women with obesity. Diabetes, Obesity and Metabolism, 25(4), 975–984.
[35] Urva S, et al. The novel dual glucose-dependent insulinotropic polypeptide and glucagon-like peptide-1 receptor agonist tirzepatide transiently delays gastric emptying similarly to selective long-acting GLP-1 receptor agonists. Diabetes Obes Metab. 2020;22(10):1886–1891.
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[38] Meyer, E.J., et al. (2020). Periprocedural euglycemic diabetic ketoacidosis associated with SGLT2 inhibitor therapy during colonoscopy. Diabetes Care, 43(11), e181–e184.
[39] Bouvet, L., et al. (2021). Point-of-care gastric ultrasound: an essential tool for individualised management in anaesthesia and critical care. Anaesthesia Critical Care & Pain Medicine, 40(6), 100984.
[40] Bisinotto FMB, et al. Gastric residual volume estimation using Perlas's formula: a validation study. Indian J Anaesth. 2022;66(5):354–359

Quantitative gastric volume estimates derived from antral CSA should nevertheless be interpreted alongside the overall ultrasound examination, as prediction models have recognised limitations in individual patients.[40] Prospective gastric ultrasound studies have identified retained gastric contents in patients receiving GLP-1 RAs despite reported fasting.[1,2,41] Gastric PoCUS may therefore provide a more individualised assessment of aspiration risk.[42] Retained gastric contents have also been demonstrated in individual GLP-1 RA cases and prospective volunteer studies.[43,44]

Clinical Uncertainty and Limitations of Gastric PoCUS

Although gastric PoCUS provides objective information about gastric contents, it should be used as an adjunct to clinical assessment rather than as a replacement for fasting history, symptoms, or clinical judgement.[39,45] Image acquisition and interpretation are operator-dependent, and an inconclusive examination should not be interpreted as confirmation of an empty stomach.[39,46] Published studies suggest that competency improves with structured training and repeated supervised examinations.[46] When findings remain uncertain, they should be considered alongside the patient's fasting history, gastrointestinal symptoms, GLP-1 therapy, and overall aspiration risk.[30,45] The absence of gastrointestinal symptoms should not be used alone to exclude delayed gastric emptying.[3,30]

Technical limitations may also affect image quality and interpretation. The gastric antrum can be difficult to visualise in some patients because of body habitus, overlying bowel gas, or anatomical variations.[31,39] Altered gastric anatomy, including previous gastric surgery, may further limit the reliability of established antral cross-sectional area measurements and gastric volume calculations.[31,39] Established gastric volume models may also be less accurate when applied to thick fluids rather than clear fluid contents.[47] Appropriate patient positioning and correct identification of anatomical landmarks are therefore important when applying qualitative assessment or the Perlas grading system.

Gastric PoCUS should therefore inform, rather than determine, perioperative management.[39,45] Where the examination is technically inadequate or findings remain inconclusive, aspiration risk cannot be excluded based on ultrasound findings alone.[39,30] The decision to proceed with anaesthesia, modify airway management, or defer an elective procedure remains a clinical decision based on the complete perioperative assessment.

Role of the Anaesthetic Technician

Anaesthetic Technicians with appropriate training in low-frequency probe positioning using a 2 to 5 MHz curvilinear probe, right lateral decubitus (RLD) patient positioning, and preset optimisation may be able to support gastric PoCUS through patient preparation and image acquisition.[46,48] Structured training can develop gastric ultrasound acquisition skills in appropriately trained healthcare practitioners.[48] Their role could include preparing the ultrasound machine, assisting with patient positioning and image acquisition, and ensuring appropriate equipment is immediately available when retained gastric contents are identified.

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[41] Pai SL, et al. Assessment of gastric content using gastric ultrasound in patients on glucagon-like peptide-1 receptor agonists before anesthesia. Anesth Analg. 2026;142(4):640–649.
[42] Ayers AT, et al. Use of gastric ultrasound to identify GLP-1RA users at high risk of aspiration during surgery. Perioper Care Oper Room Manag. 2025;41:100562.
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Where gastric PoCUS suggests increased aspiration risk, the Anaesthetic Technician can anticipate changes in airway management and prepare equipment for tracheal intubation, suction, and gastric decompression as clinically indicated.[3,31] Familiarity with the sonographic appearance of clear fluid, thick fluid, and solid gastric contents can also help the technician understand the significance of the examination and subsequent anaesthetic plan. This could provide an additional way for appropriately trained Anaesthetic Technicians to support the anaesthetist, where this aligns with their training and local practice.

Airway and Pharmacological Management

Solid or high-volume gastric contents indicate an increased aspiration risk.[31,32] Where general anaesthesia is required in a patient considered to have a full stomach, rapid sequence induction with tracheal intubation may be considered.[3,29] Preparation should include functioning suction, appropriate airway equipment, and consideration of patient positioning to reduce the risk of regurgitation and aspiration during induction.[49] The final airway strategy remains dependent on the anaesthetist's assessment of the patient, gastric findings, and anticipated airway difficulty.

Where significant fluid content is identified before induction, IV erythromycin (3 mg/kg, up to 250 mg) may be considered as a prokinetic agent to accelerate gastric emptying.[3,14] Erythromycin acts as a motilin receptor agonist, stimulating gastrointestinal motility and promoting gastric emptying.[50] Current Australian recommendations suggest allowing 1 to 2 hours between administration and induction where possible.[3] However, its effectiveness specifically in patients receiving GLP-1 RA therapy has not yet been established, and repeat gastric PoCUS after administration may be considered where clinically appropriate.[3,15]

Gastric decompression with a wide-bore gastric tube may also be considered when retained contents or gastric distension remain a concern.[3] This does not remove the need for appropriate aspiration precautions, as gastric contents may remain despite decompression.[49] Where adequate risk mitigation cannot be achieved, full-stomach precautions or deferral of an elective procedure may be required.[29]

Preoperative Gastric PoCUS and Prokinetic Therapy

Gastric PoCUS could be performed in the preoperative holding area when delayed gastric emptying is suspected.[3,42] Advances in handheld ultrasound may make gastric PoCUS increasingly practical in perioperative settings.[51] Trained Anaesthetic Technicians could perform gastric antral image acquisition and assist with patient positioning, with images reviewed by the anaesthetist before induction.[46,48]



[49] Li XY, et al. Perioperative management of patients on GLP-1 receptor agonists: risks, recommendations, and future directions—a narrative review. J Clin Anesth. 2025;104:111871.
[50] Peeters T, Matthijs G, Depoortere I, et al. Erythromycin is a motilin receptor agonist. Am J Physiol. 1989;257(3 Pt 1):G470–G474.
[51] Lamm R, Collins M, Bloom J, et al. Postoperative handheld gastric point-of-care ultrasound and delayed bowel function. J Am Coll Surg. 2023;236(4):554–559. doi:10.1097/XCS.0000000000000536.

The limitations of standard fasting intervals are illustrated by Sidhu (2025), who reported retained solid gastric contents (Grade 3 antrum) in a patient taking a GLP-1 RA despite 19 hours of fasting.[15] Intravenous erythromycin was administered, with repeat gastric ultrasound showing reduced solid content after 15 minutes and an empty antrum after 100 minutes.[15]

Where retained gastric contents are identified, IV erythromycin may be considered according to current recommendations.[3,15] Repeat gastric PoCUS may then be used to assess changes in gastric contents and inform subsequent anaesthetic planning.[3,15] However, the optimal timing of repeat ultrasound following erythromycin remains uncertain.[15]

Perioperative Management Considerations

Phase of Care	Key Clinical Interventions	Rationale & Evidence
Preoperative	• Document GLP-1 RA agent, dose, indication, and adherence to the 24-hour clear-fluid diet. • Screen for active GI symptoms. • Routine cessation of GLP-1 RA medication is not recommended.[3,29,30]	Medication cessation may worsen glycaemic control.[3,30] Active gastrointestinal symptoms may indicate delayed gastric emptying, although the absence of symptoms does not exclude it.[3]
Pre-induction	• Perform gastric PoCUS when adherence to the clear-fluid diet is uncertain or delayed gastric emptying is suspected.[3,42] • Consider IV erythromycin (3 mg/kg, up to 250 mg) 90–120 min preoperatively, or treat as full stomach.[3,14,15]	Gastric PoCUS can assess residual gastric contents,[39] while erythromycin acts on motilin receptors to promote gastric emptying.[14,50]
Intraoperative	• Consider rapid sequence induction with tracheal intubation for a confirmed or suspected full stomach.[3,29] • Avoid routine use of SGAs/LMAs when full-stomach precautions are required.[3,29] • Consider gastric decompression with a wide-bore gastric tube where retained contents remain a concern.[3]	These measures are intended to reduce aspiration risk when significant retained gastric contents are suspected.
Postoperative	• Monitor in PACU for respiratory complications and significant PONV as clinically indicated.[49]	Postoperative monitoring allows early recognition and management of complications.

PART 4: FUTURE DIRECTIONS & CLINICAL INNOVATION

Computer-Assisted Gastric Ultrasound

Gastric PoCUS remains dependent on correct probe positioning, identification of the gastric antrum, manual measurement of antral cross-sectional area (CSA), and operator interpretation.[39,52] Emerging computer-assisted ultrasound systems may help reduce some of this variability by automatically identifying the gastric antrum and calculating CSA from gastric ultrasound images.[52,53] Zou et al. developed a real-time automated system using 63,883 ultrasound images from 907 gastric ultrasound videos, with automated measurements showing good agreement with human operators.[52] More recently, the REASON framework was developed specifically for automated gastric content assessment, combining supine and right lateral decubitus (RLD) ultrasound views to support aspiration risk assessment.[53]

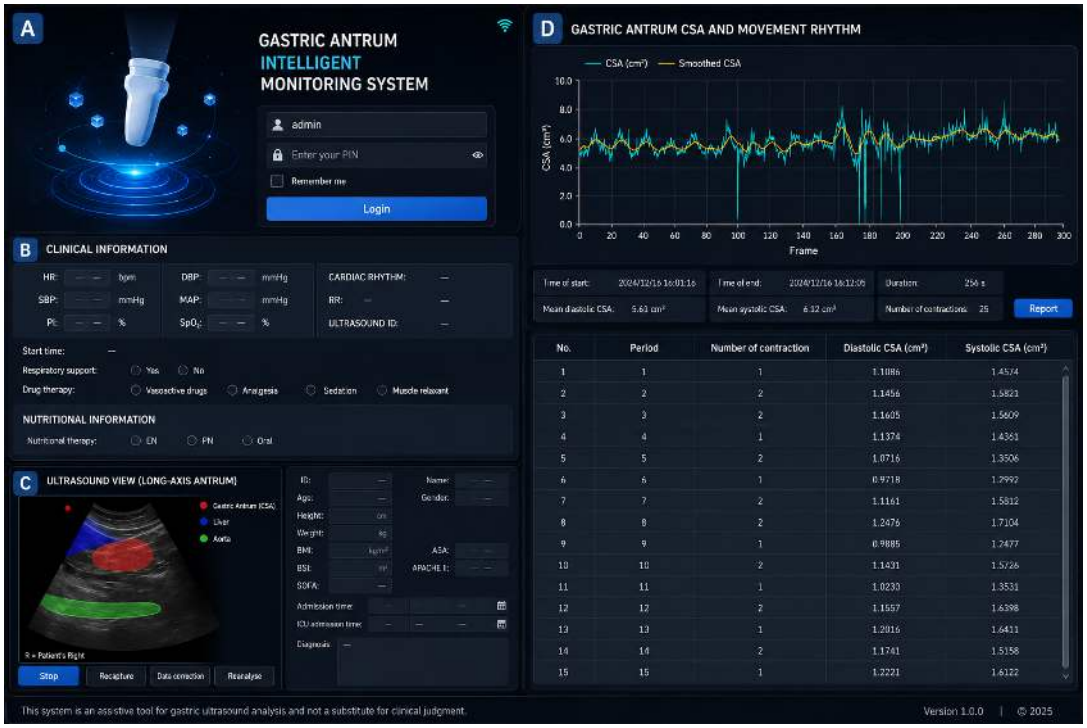


Figure 2. Gastric Antrum Intelligent Monitoring System. (A) System interface; (B) clinical information entry; (C) automated identification of the gastric antrum, liver, and abdominal aorta; and (D) automated antral cross-sectional area (CSA) and motility analysis. Adapted from Zou et al. (2025), with the image enhanced for readability.[52]

These developments could be applied to the preoperative assessment of patients taking GLP-1 receptor agonists. Computer-assisted gastric ultrasound could act as an earlier screening tool without replacing the anaesthetist's assessment.[52,53] A trained clinician could acquire standard gastric ultrasound views during preoperative admission, while software assists with antrum identification, CSA measurement, and recognition of potentially significant gastric contents. Patients with concerning or technically uncertain findings could then be referred to the anaesthetic team for formal assessment before entering the operating theatre.[52,53]

[52] Zou T, et al. Artificial intelligence real-time automated recognition of the gastric antrum cross-sectional area and motility rhythm via bedside ultrasound: a pilot study. Sci Rep. 2025;15:13883.
[53] Xiao NF, et al. REASON: probability map-guided dual-branch fusion framework for gastric content assessment. Biomed Signal Process Control. 2026;123:110249.

Emerging nursing research suggests that gastric ultrasound acquisition can also be taught to appropriately trained healthcare professionals.[48,54] A 2026 prospective cohort study found that registered nurses with no previous ultrasound experience achieved competency in gastric PoCUS following structured training, with approximately 30 supervised assessments estimated to achieve a 95% success rate.[48] A separate prospective pilot study demonstrated that trained nurses could incorporate gastric PoCUS into clinical care, with 48 of 52 examinations producing conclusive assessments of gastric contents.[54] Although these studies were not conducted as preoperative GLP-1 screening programs, they suggest that appropriately trained nursing staff can acquire and assess gastric ultrasound images.[48,54]

A future perioperative pathway could combine standardised gastric PoCUS acquisition with computer-assisted image analysis.[52,53] Rather than allowing software to determine whether anaesthesia should proceed, the system could flag possible retained gastric contents for review by the anaesthetic team. Earlier identification could allow more time for formal gastric PoCUS, prokinetic therapy, modification of airway management, or deferral where clinically appropriate. Existing studies have examined automated gastric ultrasound analysis.[52,53] Structured training of non-medical clinicians in gastric PoCUS acquisition has also been reported.[48,54] However, prospective studies are still required to determine the safety and clinical outcomes of combining these approaches in perioperative practice.

CONCLUSION

The increasing use of GLP-1 receptor agonists has changed how fasting status and aspiration risk are assessed in anaesthetic practice. Gastric PoCUS can provide additional information when fasting status is uncertain.[39,42] The shift away from routine drug withholding towards a 24-hour clear-fluid protocol requires the operating theatre team to understand current fasting recommendations and the role of gastric PoCUS.[3,29]

The role of the Anaesthetic Technician in supporting perioperative care may expand through training in gastric PoCUS and recognising characteristic sonographic patterns such as *'frosted glass'* and *'starry night'*, helping practitioners understand gastric ultrasound findings and their clinical significance.[31,48] Understanding the use and timing of prokinetic agents such as IV erythromycin is also relevant to perioperative preparation.[3,15]

Gastric PoCUS can identify retained gastric contents before induction, helping the anaesthetic team determine whether to proceed with standard airway management or escalate aspiration precautions.[3,32] Emerging computer-assisted gastric ultrasound may improve image analysis and identify possible retained gastric contents earlier in the perioperative pathway.[52,53]

As GLP-1 receptor agonist use continues to grow, incorporating gastric PoCUS into perioperative assessment may help move practice beyond fasting time alone and towards a clearer understanding of gastric contents before induction.[3,39]

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