

Safety of independent discharge post-endoscopy with sedation: A 7-year retrospective observational study

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Dear Editor,

Sedation is widely administered during endoscopic procedures, and it would always be safest if patients are accompanied home after discharge, due to potential residual effects on cognition and psychomotor skills after sedation.¹ There are concerns for patient safety and the residual effects of sedative agents on cognition post-endoscopy. Given the concerns about patient safety, recent American and European guidelines from major gastroenterology and anaesthesiology societies recommend that patients discharged after receiving sedation should be accompanied by a responsible adult, such as a family member, guardian or friend.²⁻³ In the Singapore context where this study was performed, there are varied practices between hospitals, with some requiring the patient to postpone the procedure or be admitted post-sedation if there is no accompaniment. The current guideline suggests accompanied discharge for patients sedated with midazolam and fentanyl, but leaves individual institutions to decide on independent discharge for those sedated with propofol.⁴

However, this requirement often imposes a significant logistical burden on patients, especially those without family or social support. It was found that only 46% of patients completed a colonoscopy within 6 months of abnormal faecal immunochemical test results, with 57.1% attributing this to a lack of transportation, with remarks that patients lacked access to accompaniment.⁵ This threatens to be an ever-growing challenge, with increased social mobility, reduced intergenerational living, delayed marriages, dual-career families, and fewer children.

An opposing view has challenged the status quo, with a growing body of literature finding that escorts for sedated patients may be unnecessary, with no increase in adverse outcomes.⁶⁻⁷ These studies found that patients sedated with propofol who fulfilled

discharge criteria, such as the ability to walk in a straight line and an appropriate level of consciousness, had no significant increase in traffic accidents and no impairment in driving ability when discharged home alone.⁸ These findings underscore the need for evidence-based policy refinement that balances patient autonomy, access to care, and procedural safety.

The authors conducted a retrospective observational study using data from the electronic health record of Tan Tock Seng Hospital, Singapore, covering the period from January 2017 to January 2024. The study population included patients who underwent sedated endoscopic procedures, and were subsequently discharged without an escort. Eligibility for unaccompanied discharge was determined by trained clinical staff based on predefined clinical and social criteria, such as being able to ambulate independently, ability to take public transport, and lack of cognitive impairment. Following the procedure, patients were monitored in the recovery area, and only patients who achieved a Post Anaesthetic Discharge Scoring System score meeting the discharge threshold were permitted to leave without an escort. To assess post-discharge outcomes, a random subset of patients received a follow-up phone call within 24 hours. The follow-up aimed to identify any adverse events or complications. Patient-reported symptoms were categorised using the Adverse Events in Gastrointestinal Endoscopy (AGREE) classification, which stratifies complications into minor and major events.

From January 2017 to January 2024, 10,281 patients were recorded to have been discharged home unaccompanied. This represents 9.3% of all patients who underwent endoscopy. A total of 3066 patients (29.8%) were successfully contacted, of whom only 36 (1.2%) reported any complications, and only 3 (0.1%) had major classifications based on the AGREE classification of Grade II and above (Table 1). None of the complications were directly linked to being

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Table 1. Percentage of patients who went home alone and had symptoms on follow-up call.

Year	2017	2018	2019	2020	2021	2023	2024 ^a	Total
Total endoscopy patients	18,501	18,847	16,171	13,209	15,389	26,242	2295	110,654
Total home alone, no. (%)	1789 (9.7)	1723 (9.1)	1601 (9.9)	1542 (11.7)	899 (5.8)	2455 (9.4)	272 (11.9)	10,281 (9.3)
Sampled patients who could be contacted, no. (%)	116 (6.5)	555 (32.2)	648 (40.5)	541 (35.1)	212 (23.9)	864 (35.2)	127 (46.7)	3066 (29.8)
All complications, no. (%)	2 (1.7)	6 (1.1)	13 (2.0)	3 (0.6)	3 (1.4)	5 (0.6)	4 (3.1)	36 (1.2)
Complications related to going home alone, no. (%)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
List of minor complications	1. Vomiting 2. Nausea and loss of appetite	1. Fever 2. Sore throat 3. Fever and chest pain 4. Epigastric pain 5. Post-scope haematochezia 6. Pain over anus	1. Sore throat and epigastric pain 2. Sore throat 3. Epigastric pain 4. Haematochezia 5. Sore throat 6. Abdominal pain 7. Abdominal pain and backache 8. Pruritus 9. Sore throat and mouth ulcer 10. Vomiting + small amount of haemetemesis 11. Abdominal pain 12. Right upper limb swelling	1. Cough and pain over ribs 2. Abdominal pain 3. Abdominal bloating	1. Chest pain 2. Fever	1. Unspecified/generalised pain 2. Fever and rhinorrhoea 3. Stomach pain 4. Fever	1. Nausea and neck pain 2. Sore throat 3. Sore throat 4. Headache	
Major complications, no. (%)	0 (0.0)	0 (0.0)	1 (0.2)	0 (0.0)	1 (0.5)	1 (0.1)	0 (0.0)	3 (0.1)
Types of major complications			Haematochezia secondary to haemorrhoids		Dyspnoea secondary to pneumonia	Pain over hands and legs		

^a Data for 2024 were only collected in January.

discharged home unaccompanied. The most common reported complications included abdominal pain (13.9% of total complications), sore throat (11.1%), fever (5.6%), and nausea (5.6%). The major complications reported were haematochezia due to haemorrhoids, dyspnoea due to pneumonia, and pain in the limbs that required admission. There were no complications related to the patients going home without accompaniment, for example, involvement in accidents such as falls or getting lost on the way home (Table 1).

These results of few, minor, and transient complications are consistent with a study by Martin et al.⁹ Our study corroborates a driving-simulation study of cognitive function, which found that driving abilities on a simulator were fully restored 4 hours after propofol sedation,¹⁰ suggesting that the dangers of travelling home alone post-sedation on public transport without an escort may not be associated with significant complications.

The findings have several important implications for clinical practice. The requirement for an escort can be a significant barrier to care, particularly for elderly patients, those with limited social support, or individuals living alone. Often, these individuals are faced with the prospect of having to call a friend or social worker to accompany them to and from procedures, which increases their barrier to undergoing procedures. Patients who are unable to find an escort may be admitted to the hospital for overnight monitoring after the procedure, potentially exacerbating the long wait times for an inpatient bed. This implies a significant percentage of resource wastage and inefficient use of resources. In a selected group of patients with independent function and good cognitive function, and in a city with good public and private transport infrastructure, and a good network of healthcare facilities such as Singapore, this practice could contribute to better resource utilisation in ambulatory settings without compromising patient safety. Good pre-selection of patients, an appropriate discharge screening tool, clear post-discharge advice, staff assistance with transportation options for selected patients, and a robust post-discharge follow-up plan can further enhance safety and allow patients to return home without accompaniment.

However, this study has limitations. First, due to manpower constraints, the authors could only focus on contacting the higher-risk individuals (29.8% of total patients successfully contacted), which may introduce response bias. Second, this is a single-centre study, and while the cohort size is large, institutional practices, staffing, and patient demographics may limit generalisability. Last, data loss in 2022 due to technical issues could have excluded relevant events,

although the proportion of lost data was small relative to the total study period.

In conclusion, while it is safer to discharge all patients post-sedation-assisted endoscopic procedures with an escort, careful selection of lower-risk patients with appropriate clinical safeguards will likely allow a significant proportion of patients to be discharged safely without an escort, reducing barriers to care without additional risks.

Ethics statement

Approval of the research protocol was obtained from the National Healthcare Group Domain Specific Review Board (2023/00995).

Declaration

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