

Preventing aspiration events in hospitalized patients using prophylactic antiemetics: a survey of in-hospital care providers

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Rationale

Aspiration events in the hospital setting are common and associated with significant morbidity, mortality, and health-care burden (1,2). Aspiration generally presents as coughing, respiratory failure, hypoxia, vocal changes or can be asymptomatic in silent aspiration events (3). Patients at higher risk for aspiration include those with impaired airway protection, such as those with acute neurological conditions, or patients who have received sedative or anesthetic medications (4,5). Older adults are particularly of high risk given that they often have multiple co-morbidities, frailty, cognitive impairment, and/or decreased muscle tone (6,7).

Strategies to prevent aspiration events in hospitals include patient positioning during meals, prompt Speech Language Pathology consultation for swallowing assessments, and protocols post-operatively to progress diet consistency in a safe manner (8). There is some evidence for the use of antiemetic prophylaxis in aspiration prevention in specific populations (9,10), however little evidence exists examining their utility more broadly in prevention of aspiration events for adult hospitalized patients.

We propose a survey of in-hospital physicians to identify physicians' experiences with aspiration events, perceptions regarding morbidity and mortality of aspiration events and equipoise regarding the use of prophylactic antiemetics to prevent aspiration events.

Research Question

The question this survey proposes to answer is: "For physicians providing in-hospital care to patients over the age of 18 what are perceptions regarding the frequency and burden of aspiration events, current antiemetic usage and opinions regarding the use of prophylactic antiemetics to reduce aspiration events".

PICO Question

P: Physicians providing in-hospital care to adult patients (over the age of 18).

I: Prophylactic antiemetics

C: Usual care (No scheduled antiemetics; PRN antiemetics)

O: Ascertain perceptions regarding the frequency and burden of aspiration events, current antiemetic usage and opinions regarding the use of prophylactic antiemetics to reduce aspiration events.

Objectives

1. Determine physicians' perceived burden of in-hospital aspiration events (morbidity and mortality).
2. Determine physicians' usual practice patterns regarding prescribing antiemetic medications.
3. Determine physicians' opinions regarding the use of antiemetic therapies to reduce aspiration events.

Design, Setting, Population

This study will be a survey of physicians who provide in-hospital care to adult patients in Canada. It will be housed on RedCAP and disseminated through the Canadian Medical Association (CMA).

Inclusion criteria: All hospital-based physicians who care for adult patients

Exclusion Criteria: There are no exclusion criteria

Main Intervention

The survey will determine what the current antiemetic prescribing practices are for providers of adult inpatient care. It will determine providers' opinions regarding the burden of in-hospital aspiration events and whether equipoise exists regarding the use of prophylactic antiemetics in inpatients. Providers will be asked to fill in a brief, less than ten-minute survey.

Survey Methodology

We will conduct a cross-sectional survey of adult in-hospital physicians in Canada. We will use survey development methodology proposed by Burns et al. to design our survey, in accordance to the following steps:

Item generation and reduction

We will draft an extensive list of questions by identifying all questions which were identified as important during our interviews. We will invite several co-authors to review and provide feedback on the accuracy and relevance of the survey content and questions. Similar or duplicate questions will be removed.

Pre-testing and clinical sensibility testing

We will distribute the surveys to all study co-authors. We will ask pre-testers to review the survey to ensure that each question's content was comprehensible, accurate, comprehensive, and likely to yield pertinent information regarding the attitudes and opinions of participants of the survey. We will modify the survey at each stage according to the feedback provided.

Pilot testing

We will conduct pilot testing of the survey among 5 in-hospital adult physicians across Canada. We will review the open-ended comments to identify if certain questions were not clear to participants, with final modifications to the survey accordingly prior to survey distribution.

Survey Administration

The survey will be created on the RedCap platform and distributed nationally through the Canadian Medical Association through their mailing list-servers. The survey will be open from November 1, 2025 to February 1, 2026. There will be three email reminders sent to survey participants.

Given that the size of the population of interest is not known prior to survey initiation, we cannot conduct a proper sample size calculation.

Timelines

July-August 2025: REB protocols and approvals

August-September 2025: Survey questionnaire development; pilot testing of survey; development of RedCap questionnaire

November 2026-February 2026: Open survey Distribution of survey to physicians nationally through CMA channels

February-April 2026: Analysis of data

May-July 2026: Publication of national survey

Analysis

Descriptive analysis of responses from survey with regards to:

- Antiemetic use in adult hospitalized patients
- Opinions regarding morbidity and mortality of aspiration events
- Determination if equipoise exists regarding antiemetic use for aspiration prophylaxis in hospitalized adults

Ethics

This study is a national study of physicians who provide in-hospital care to adults. There will be no direct patient contact for this study. Research ethics board (REB) approval will be sought. All data will be de-identified prior to analysis. All data will be housed in encrypted files and on password-protected computers.

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