

Examining Healthcare Costs in Chemotherapy Induced Nausea and Vomiting: A Retrospective Analysis

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Background

- Chemotherapy-induced nausea and vomiting (CINV) is a major adverse effect of chemotherapy and has a significant impact on patients' quality of life.
- Chemotherapeutic agents are categorized into 4 emetic risk groups: high, moderate, low, and minimal based on the guidelines of the National Comprehensive Cancer Network

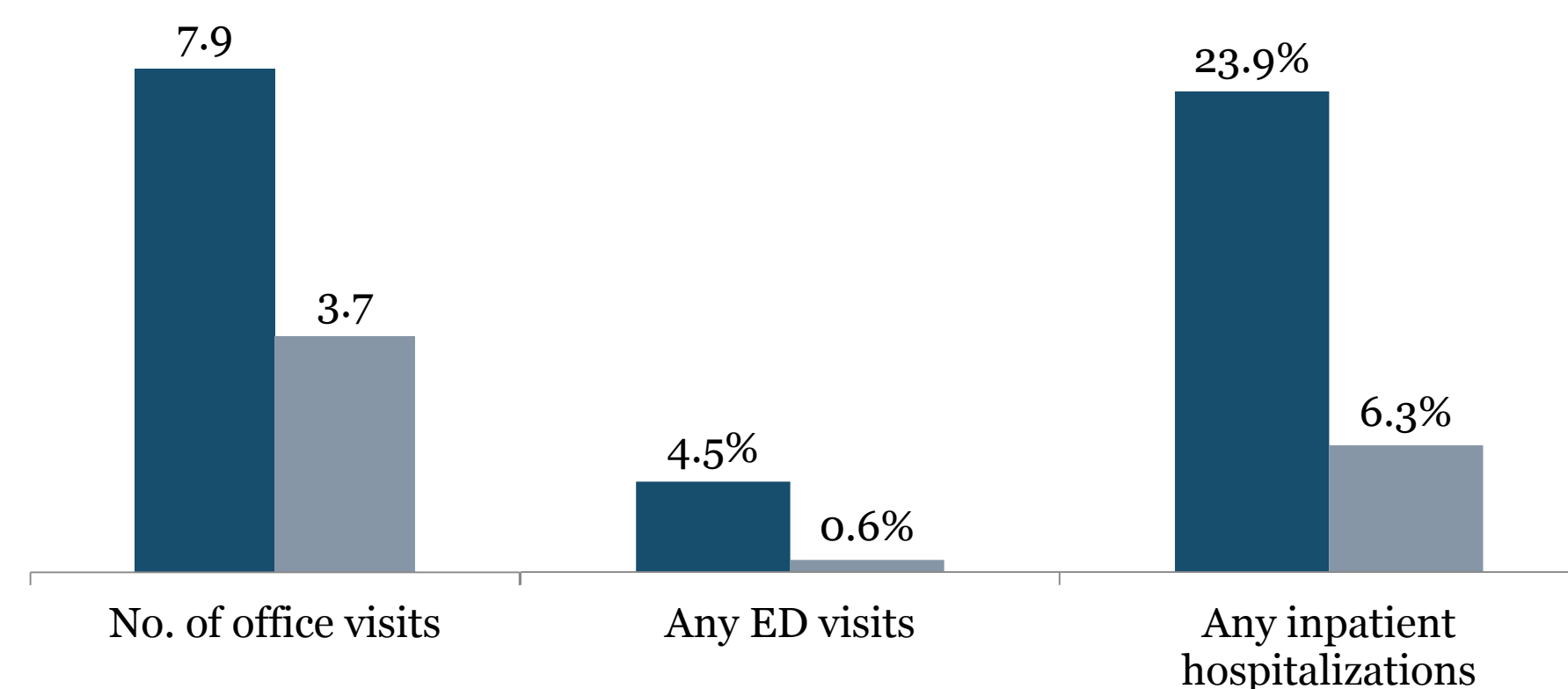
Objective

To examine CINV related health care utilization and costs incurred during the first cycle of chemotherapy by patients treated with highly emetogenic chemotherapy (HEC) or moderately emetogenic chemotherapy (MEC).

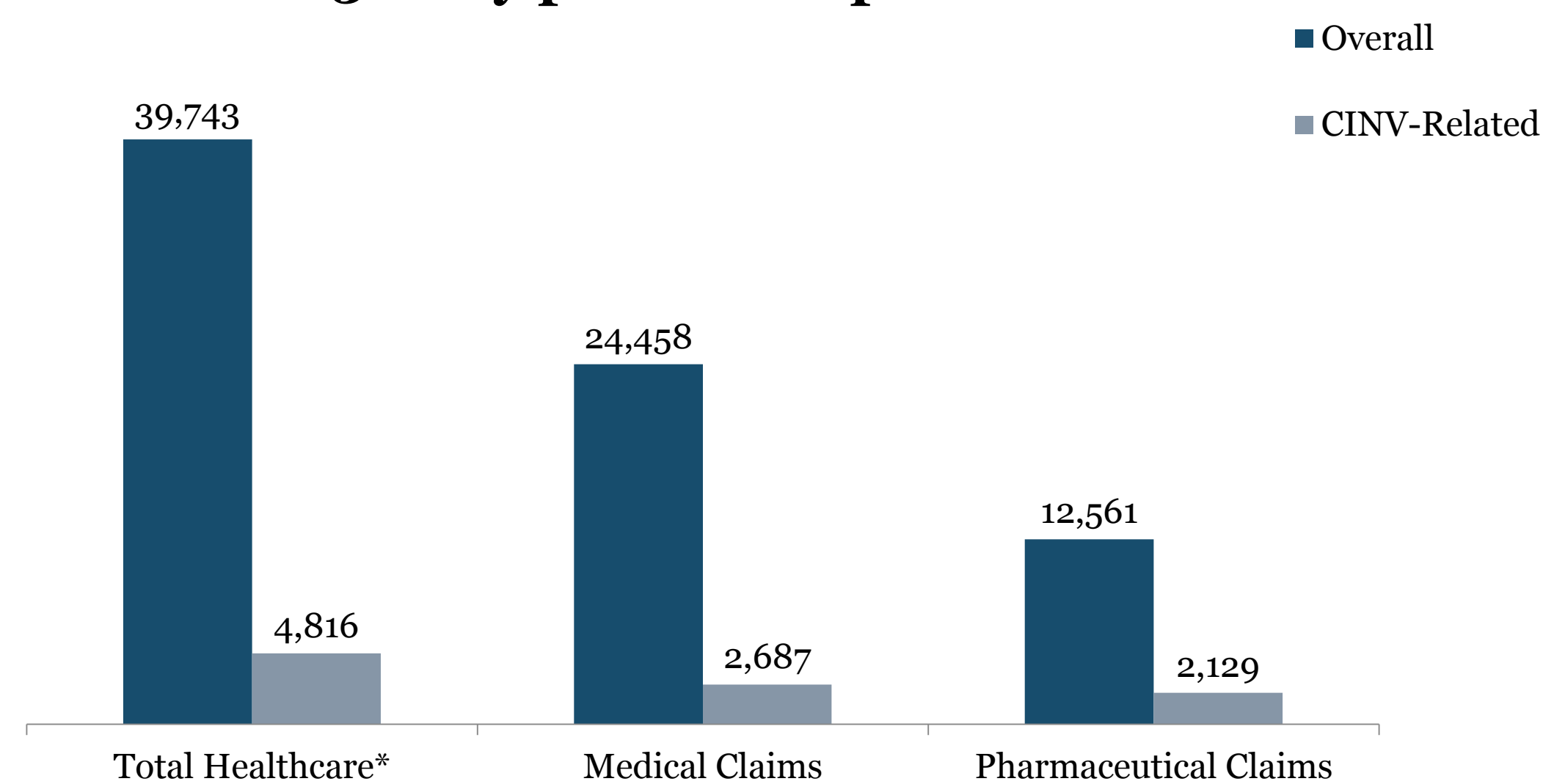
Methods

- Retrospective cohort analysis of claims from the i3 Ingenix LabRx database. Patients were identified during the period of 4/1/08 to 3/31/09.
- Inclusion criteria: Age ≥ 18 years with a medical or Rx claim for HEC or MEC during the identification period; AND had a medical claim with diagnosis of breast, lung, or colon in any diagnosis field; AND received a 5-HT₃-RA on the index date.
- Exclusion criteria: Chemotherapy in the pre-index period; OR not continuously enrolled; OR received ≥ 2 5-HT₃-RAs on the index date.
- Index date was the Day 1 of chemotherapy and patients were followed until the next cycle of chemotherapy or 30 days after the index date.
- CINV was defined on medical claims with a ICD9 code of nausea/vomiting (787.0x), or dehydration/volume depletion (276.5x) as a primary diagnosis.
- CINV-related utilization was identified on medical claim with a primary diagnosis of CINV. CINV related costs also included the cost of all antiemetic treatment.

Healthcare utilization in patients with CINV in the 30 day post-index period



Healthcare charges in patients with CINV during 30-day post-index period



*Total healthcare charges are the sum of Medical and Pharmaceutical Claims

Results

- A total of 9,558 patients were identified.
- Mean age was 55.8 years old and 71.8% female.
- Of those identified, 28.7% treated with HEC and 71.3% with a MEC regimen.
- Cancer tumor type was 51.3% breast, 34.3% lung, and 21.8% colon.
- Overall, 10.7% (294/2,739) of patients on the HEC regimen experienced CINV compared to 13.2% (901/6,819) of those on the MEC regimen.
- Patient with CINV incurred \$39,743 in health care charges in the first 30 days of treatment vs. \$34,696 in those without CINV (p < .001).

Discussion

- CINV related utilization in the first month after chemotherapy, including office visits and hospitalizations, was common.
- Patients with CINV incurred almost \$5,000 more in costs than patients without CINV.
- True costs and actual numbers of visits may be higher, as this analysis considered only costs where the primary diagnosis was CINV.
- Higher rates of CINV in patients using MEC compared to HEC may reflect more aggressive prophylactic treatments
- Analysis considers only first cycle of chemotherapy; further research examining cost in later cycles is underway.
- Limitations: data for billing purposes, lack clinically relevant information, potential for systematic reporting/coding error, results may not be representative of individuals without commercial health insurance.

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