

The secret

(outpatient) garden:

Using the OMOP CDM to better differentiate between outpatient and inpatient diagnoses in VA EHR data

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INTRODUCTION:

- Requiring 2 outpatient or 1 inpatient diagnosis records is common to remove rule-out or differential diagnoses.
- In the Department of Veterans Affairs (VA), the source table can be used to differentiate between outpatient vs. inpatient clinical settings (outpatient workload vs. inpatient file).
- However, this does not account for inpatient consultations documented as outpatient visits that reside in the outpatient source table.
- As part of the transformation to OMOP, a custom VISIT_CONCEPT_ID was needed to appropriately designate outpatient-within-inpatient-stays while maintaining source fidelity.

METHODS:

1. Queried outpatient and inpatient records for a predefined list of ICD-10 codes for calendar year 2019.
2. Each record's clinical setting was defined based on two approaches:
 1. VA Source table
 2. OMOP VISIT_CONCEPT_ID
3. Patients qualified as having the condition if they had 2 outpatient diagnoses on different dates or 1 inpatient diagnosis.

RESULTS:

- Frequency of qualifying patients varied by approach.
- Percent change ranged from -2.44% (more patients from source tables) to +105% (more patients from OMOP) with median being +1.35%

Different approaches to categorizing clinical setting of a diagnosis can affect patient counts.

VISIT_CONCEPT_ID is one approach to quickly and easily categorize clinical setting.



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Figure 1. Top 5 Conditions with more patients identified by OMOP VISIT_CONCEPT_ID -based approach

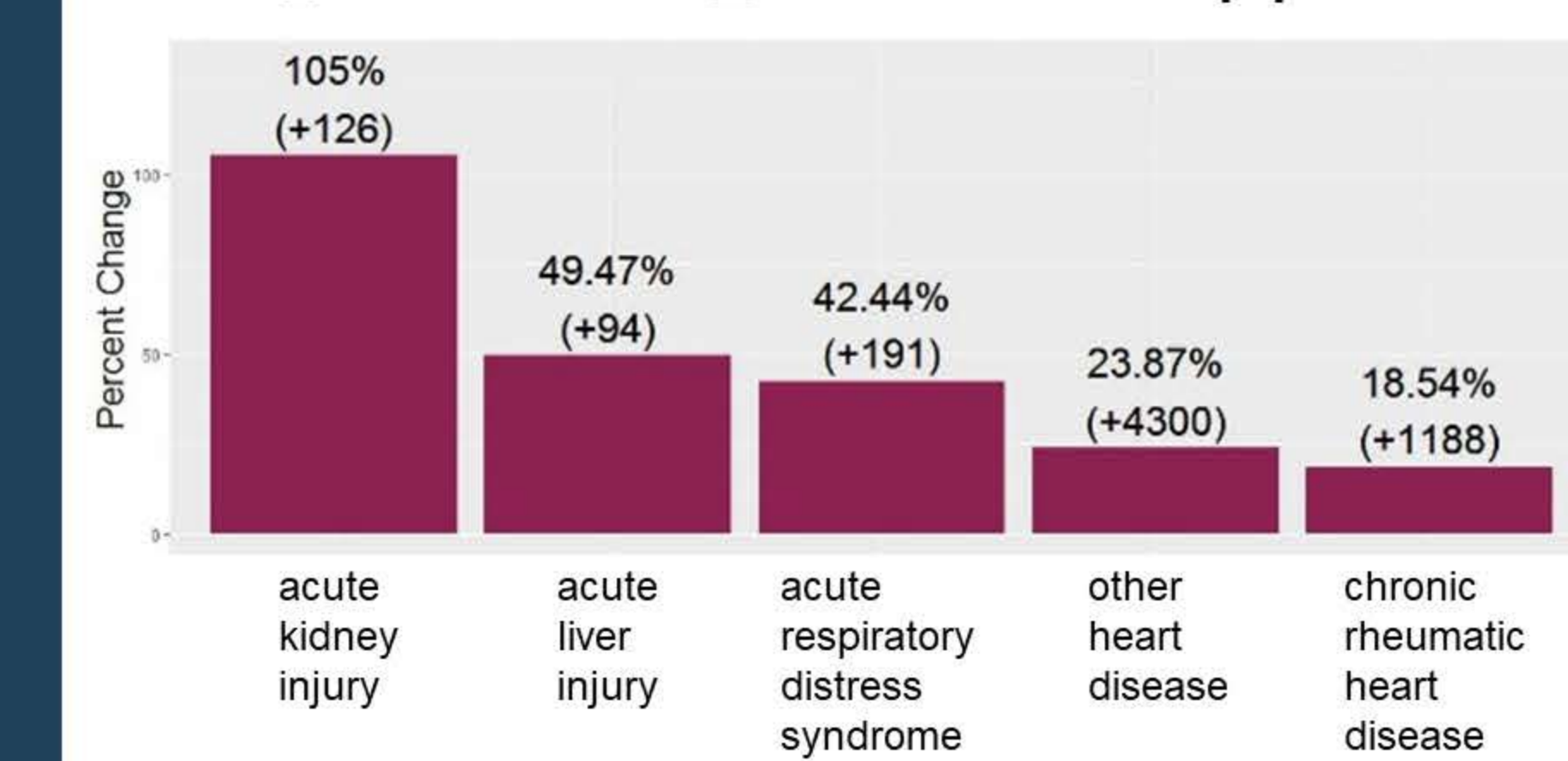
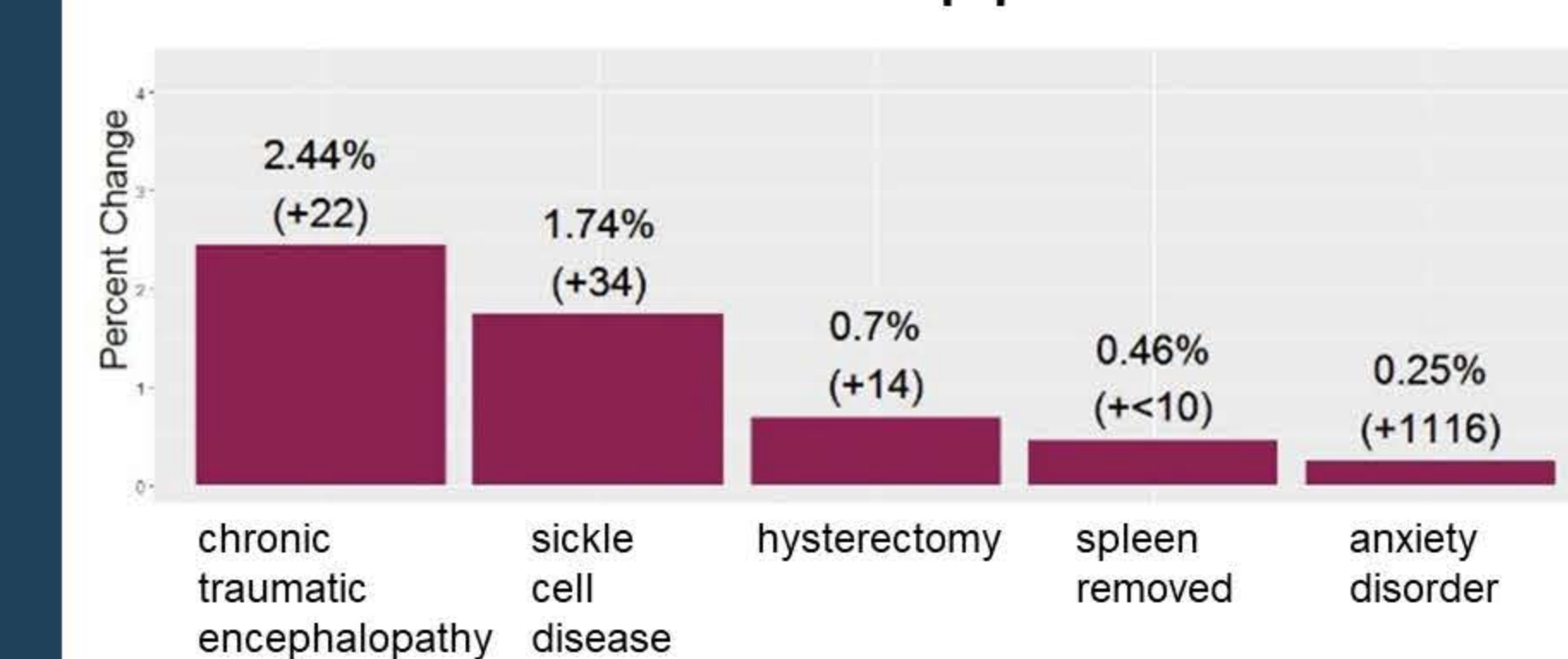


Figure 2. Top 5 Conditions with more patients identified by VA Source Table-based approach



- Patients who did not qualify from VA source tables but did from OMOP VISIT_CONCEPT_ID changed status because outpatient workload records were classified as Outpatient Visit Within Inpatient Visit in OMOP
 - A singular VA outpatient record became a singular OMOP inpatient record
- Patients who did qualify from VA source tables but did not from OMOP VISIT_CONCEPT_ID changed status because inpatient records were classified as Non-hospital Institution Visit or unmapped
 - A singular VA inpatient record became a singular OMOP outpatient record
- In conclusion, researchers should be thoughtful and deliberate when assigning clinical setting. Different approaches may lead to different results, and different projects may require different approaches.

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