Data Relationship Document

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## Overview

This document provides an overview of the data structure, their relationships, challenges encountered, and enhancements made in the context of the Patient, Provider, and Encounter CSV files. Specifically, it addresses the challenge of mapping the **encounter.status** from the Encounter resource to the **patient\_status** in the Patient CSV.

## Data Files

1. **Patient CSV**

* Fields: "Patient\_ID," "first\_name," "last\_name," "suffix," "prefix," "dob," "gender," "address1," "address2," "city," "state," "zip," "country," "phone," "marital\_status," "death\_date," "patient\_status," "email"

1. **Provider CSV**

* Fields: "provider\_id," "first\_name," "last\_name," "suffix," "dob," "gender," "specialty," "organization," "other\_id," "id\_type," "phone," "email"

1. **Encounter CSV**

* Fields: "encounter\_id," "patient\_id," "practitioner\_id," "encounter\_date," "encounter\_reason," "encounter\_status," "encounter\_notes"

## Relationships

* **Patient - Encounter Relationship:**

The **patient\_id** in the Encounter CSV relates to the **Patient\_ID** in the Patient CSV, establishing a connection between patient data and their respective encounters.

* **Provider - Encounter Relationship:**

The **practitioner\_id** in the Encounter CSV relates to the **provider\_id** in the Provider CSV, linking encounter data to the corresponding healthcare provider. Perhaps there is a mistake in the resource as the provider id is not “f002” as practitioner id.

## Challenges Encountered

### Mapping encounter.status to patient\_status

A challenge was faced in mapping the **encounter.status** from the Encounter resource to the **patient\_status** in the Patient CSV.

**Challenge:** The Encounter resource contains an **encounter\_status** field, which needed to be used in the Patient CSV as a field named **patient\_status** showing the current status of the outpatient episode. Merging these resources to reflect patient status accurately proved to be non-trivial.

**Solution:** To address this challenge, a mapping was established between the Encounter status and Patient status. Specifically, the **encounter.status** of "finished" was chosen to be mapped to the **patient\_status** in the Patient CSV.

**Mapping:** If **encounter.status** is "finished," then **patient\_status** is set to "finished" in the Patient CSV.

This solution provides a clear association between the completion status of an encounter and the overall status of the patient.

## Enhancements

To enhance the dataset's usability and clarity, consider the following:

1. **Additional Fields:**
   * Introduce additional fields in the Encounter CSV to capture more detailed patient encounter information, such as diagnosis codes or treatment provided.
2. **Normalization:**
   * Normalize date formats across all CSV files to ensure consistency.
3. **Identification:**
   * More complex id (at least 8 digits) to secure a good indexation.
4. **Documentation:**
   * Maintain comprehensive documentation for future users, outlining the data structure, relationships, and any predefined mappings.