Missing, imprecise, and erroneous influenza related LOINC codes are not uncommon in VA data. Participation in OHDSI collaborative events provides practical means to make significant improvements to a large OMOP instance.

INTRODUCTION:
• VA Informatics and Computing Infrastructure (VINCI) released its first instance of the VA electronic health record OMOP transformation in 2015, with updates, including mapping improvements, occurring quarterly.
• User requests and frequency of concept occurrence in source data typically dictate VINCI’s focus areas (i.e., clinical domains) for quality control efforts.
• Due to non-standardization of test names across facilities and missing LOINCs at the source level, mapping VA laboratory tests into the OMOP instance is complex and time consuming.
• The COVID-19 OHDSI Virtual Study-A-Thon (March) encouraged VINCI to direct mapping efforts to influenza related concepts (Table 1).

METHODS:
1. Broad string search of laboratory test name in source data
   • %flu%
   • %influenza%
2. Use a combination of laboratory test name, topography, units, and specimen to determine appropriate source to target mapping.
3. Manual curation involved three scenarios:
   • Missing LOINC -> LOINC
   • Incorrect LOINC -> Correct LOINC
   • Correct LOINC -> Correct LOINC

RESULTS:
Incorrect LOINC examples:
1. Imprecise:
   Unspecified specimen: original
   Lower respiratory specimen: mapped
2. Erroneous
   Hemophilus influenza A Ag: original
   Influenza A Ag it: mapped

Because the majority of influenza laboratory test names were not accompanied by any LOINC code in VA source data (i.e., would be unmapped in OMOP unless populated), as expected manual data curation resulted in more mapped influenza patient instances overall (blue vs. red line Figure 1).

However, because the majority of influenza instances (patient level data) were represented by an incorrect LOINC in VA source data, the impact of manual curation on each LOINC was less predictable (Figure 2).