

Correlation Between HL-7 Microbiology and Pharmacy Out Patient Data: A Case Study Using Influenza

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Objective:

The Navy Environmental Health Center is developing Health Level-7 data for use in syndromic surveillance activities. The objective of this study is to identify the usefulness of that data to identify and track influenza patients through pharmacy records.

Background:

The Navy Environmental Health Center receives Health Level-7 (HL-7) pharmacy and laboratory data daily. A correlation study between the laboratory and pharmacy data was pursued to understand the relationship between the datasets as it pertains to influenza case identification.

Methods:

Influenza medication prescriptions for the 2006-2007 influenza season were extracted from the HL-7 pharmacy data and were compared to the laboratory records during the same period. Pharmacy data were also matched to ambulatory care data to determine if treatment was based on physician diagnosis.

Results:

Substantial number of influenza-specific pharmacy records did not have corresponding laboratory or ambulatory care records.

Conclusions:

Many influenza patients were captured in the Pharmacy data that would not have met the Laboratory data case definition. There are also a significant proportion of cases that were based on solely symptomology.

Recommendations:

It is recommended to use both data sources in Pandemic Influenza modeling efforts to ensure the most robust model.