

ABSTRACT

Description of the quality of public health case reports received at a local health department and potential impact on workflow

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Objective

This paper describes a comparison study conducted to identify quality of reportable disease case reports received at Salt Lake Valley health department (SLVHD) in 2009 and 2010.

Introduction

When a reportable condition is identified, clinicians and laboratories are required to report the case to public health authorities. These case reports help public health officials to make informed decisions and implement appropriate control measures to prevent the spread of disease. Incomplete or delayed case reports can result in new occurrences of disease that could have been prevented. To improve the disease reporting and surveillance processes, the Utah Department of Health is collaborating with Intermountain Healthcare and the University of Utah to electronically transmit case reports from healthcare facilities to public health entities using Health Level Seven v2.5, SNOMED CT, and LOINC.¹ As part of the Utah Center of Excellence in Public Health Informatics, we conducted an observation study in 2009 to identify metrics to evaluate the impact of electronic systems.² We collected baseline data in 2009 and in this paper we describe preliminary results from a follow-up study conducted in 2010.

Methods

We conducted two observation studies of the workflow associated with processing case reports at SLVHD, including from 6 July 2009 to 13 July 2009 and 7 July 2010 to 21 July 2010. The 2009 study occurred during the H1N1 outbreak. The studies involved direct observations of the workflow of the triage nurse at SLVHD. To ensure we were capturing the quality of the reports received initially at the health department, we used a data collection form to document whether certain core data elements such as 'patient address', 'patient telephone number', 'hospitaliza-

tion status', 'physician notes' and so on, were missing. Currently, we are extracting data from the Utah statewide surveillance system (UT-NEDSS) to compute the 'time to diagnosis of a case', 'reporting time delay', 'time to triage a report', 'time until the start of case investigation' and so on,

Results

In 2009 ($n = 380$ reports) and 2010 ($n = 322$ reports), there were similar proportion of out-of-county reports (23 and 29%, respectively) and duplicate reports (19 and 20%, respectively). The quality of data in reports received in 2009 and in 2010 is described in Table 1. In 2009, Chlamydia, Influenza related cases, and Salmonella contributed to 68% of the reports and in 2010, Chlamydia, Giardia, and Salmonella represented 60% of the reports. The analysis of the timeliness of the reporting process is currently underway.

Discussion

The processing of out-of-county and duplicate reports continues to be a burden on the triage nurse. The hospitalization status and physician notes were more complete in 2009 than in 2010. Patient telephone number and patient address are generally required for all diseases but

Table 1 Comparison of quality of key data elements in reports received at SLVHD in 2009 and 2010

Data element	% of (updated/new) reports with information included	
	2009 (%)	2010 (%)
Patient telephone number	82	81
Patient address ^a	79	61
Hospitalization status ^a	86	20
Physician Notes ^a	82	8

^aSignificant difference at $\alpha = 0.05$.

hospitalization status and physician notes are not typically provided and/or required with the disease report. However, during the H1N1 outbreak these data were requested with the report to quickly identify routes of exposure to reduce spread. The results demonstrate the challenges and burden for public health to obtain additional data elements such as hospitalization status and physician notes.

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References

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