

Use of a health information telephone line, Info-Santé CLSC, for the surveillance of waterborne gastroenteritis

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ABSTRACT

The increasing frequency of waterborne outbreaks demonstrates that classic indicators used for the surveillance of the microbiological quality of drinking water have several gaps and that routine public health surveillance seems insufficient to allow for the rapid detection of these outbreaks. The main objective of this study was to evaluate the possibility of using a regional health information telephone line, 'Info-Santé CLSC' (Info-Health Local Community Health Centre), for the surveillance of waterborne gastroenteritis. This study measured the incidence rate of calls for acute gastrointestinal illness (AGI) placed to the Info-Santé CLSC line, investigated the relationship between the frequency of calls for AGI placed to the Info-Santé CLSC line and the turbidity of the treated water in the Quebec City drinking water plant and evaluated the relevance and the conditions of use of the Info-Santé CLSC system for the surveillance of waterborne enteric illness. A relationship between the turbidity and the calls for AGI placed to Info-Santé CLSC line was observed. Significant time lags (11, 15 and 17 days prior to the outcome) were identified in the final model derived from a Poisson model using generalized additive models (GAM) as a time series analysis. Some recommendations to improve the system were formulated even though the system already seems to be useful for the surveillance of waterborne enteric diseases.