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Project Title: Establishment of a real-time monitoring system for diarrhea related diseases

Project Number: DOH-96-DC-2016

Executing Institute: Center for Disease Control Department of Health Taiwan

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P.I. Position Title: Associate Researcher

P.I. Institute: Center for Research and Diagnostic

Abstract:

Our study is to establish a real-time monitoring system for diarrhea related diseases, because there is no database of epidemiology and pathogen combining virus, bacteria, and parasite information in Taiwan. Acute gastroenteritis (AGE) causes a huge burden in medical policy in developing and developed countries, for example, the AGE medical cost is about 50 million dollars and social cost is over 100 million dollars in USA.

This research will set up 13 pathogens detection methods, including viruses, bacteria and parasite that will cause diarrhea syndrome. Through lab data and clinical information, we can understand local prevalent pathogens for each season. The surveillance database should provide pertinent information for control of diarrhea related diseases infection.

We collected emergency center patients' stool specimens. The experimental population definition is one who were healthy and became diarrhea (more than 3 times per day) or/and with vomiting. The blank population were selected patients who were attend ER for surgical care. Both of these two populations were asked to fill Epi information datasheet.

We collected 621 specimens from Jan 1st to Dec 31th in 2008 but we had questioner and stool is 287 specimens. There were no any significant differences between sex. Over all, virus were the major virulence pathogen, than bacteria. The single detection positive rate were virus 37.9%, bacteria 7.9%. There were some cases caused by both pathogens, the rate were virus plus bacteria 4.4%, and virus plus parasite 0.4%. But still 32.5% couldn't find any pathogens in our system.