

Call for a universally accepted surveillance and reporting form for acute gastroenteritis (AGE) on ships

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This issue of International Maritime Health is dedicated to public health issues on passenger ships. The state-of-the-art article of Mouchtouri et al. [1] shows clearly how important ship-to-shore communication is to prevent and handle outbreaks of AGE.

A key element of any vessel sanitation program (VSP) is for the medical staff aboard to fill out an AGE surveillance form, update it continuously, and report information from the latest version of the form to the public health authorities ashore prior to port arrival.

The US Centers for Disease Control and Prevention (CDC) established its VSP in the early 1970s. It is mandatory for all passenger ships visiting US ports and thus is followed strictly. The CDC's VSP Operation Manual was last revised in August 2005, and a 284-page draft version of VSP 2010 is now available [2]. Essential points include:

- A 'reportable case of AGE' it defines as a **report of diarrhoea** (3 or more episodes of loose stools in a 24 hour period) or **vomiting and one additional symptom**, like one loose stool, abdominal cramps, or fever (temperature = or > 38°C/100.4°F).
- The comprehensive US AGE surveillance log for each cruise must be maintained **daily** by the medical staff and list the ship's name, the cruise dates and the cruise number, the number of passengers and of crew aboard, all reportable cases of AGE, and all passengers and crew members who are dispensed anti-diarrhoeal medication on board.
- For every AGE patient, the log entry must contain: case number, name, age, gender, passenger or crew, crew member's position, cabin number, meal seating information, date + time of first medical visit or report, date + time of illness onset, illness symptoms (number of episodes of diarrhoea and of vomiting in a 24-hour period, bloody stools, recorded temperature, abdominal cramps, headaches, muscle aches), anti-diarrhoeal medication (yes/no), presence of underlying medical conditions which may affect interpretation of AGE, and a yes/no entry for whether or not this was a 'reportable case'.
- Reportable AGE passengers are advised to, while reportable AGE crew must be isolated in a cabin or designated restricted area until symptom-free for a minimum of 24 (or for food employees: 48) hours.
- The AGE surveillance log must be continuously updated for each patient with date + time of last symptom and date + time of isolation release/return to work.
- Asymptomatic cabin mates and immediate contacts of symptomatic crew must be given proper instructions and interviewed regarding their condition. Clinical updates for each asymptomatic crew contact must be documented at least twice (after 24 and 48 hours).
- Certain key people aboard, like master, staff captain, hotel director, department heads, guest services, maitre d', housekeeping, room service, and security, must be kept continuously informed not only about the current number of AGE patients, but also about every status change in each

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patient (start, extension and end of isolation; unfit or fit for duty).

- Every vessel destined for a US port from a foreign port must submit a standardized AGE report based on the number of reportable cases in the AGE log to the VSP no less than 24 but not more than 36 hours before arrival. If the AGE number changes after the initial report, an updated one must be submitted no less than 4 hours before the vessel's arrival at the US port.

Hence, it does not take many AGE patients to completely overwhelm a ship's limited medical staff, which must handle all these administrative tasks in addition to regular patient-related work and emergencies. To help manage US VSP requirements, the two largest cruise companies are now successfully utilizing the same software program based on the US VSP, 'Surveillance, Treatment, And Reporting Of Disease On Cruise Ships'. Designed by a ship's doctor (J. Steenkamp) after having to deal with a large AGE outbreak, STARDOCS makes AGE surveillance, tracking, and reporting easier and less prone to error. Particularly time saving are the automatically generated reports and isolation/sick notes that can be e-mailed at the click of a button, and early warning flashes when the system detect patterns that may lead to an outbreak. Currently, the commercial system is undergoing substantial expansion and refinement, but a basic version should be made available from agencies ashore demanding reports from ships.

CDC's VSP is well established, and the AGE surveillance log records information relevant for the ship and the public health agencies assisting ashore. The port of Sydney and those in Canada and Greece have, among others, vessel sanitation programs that are closely modelled on the US VSP, and Mouchtouri et al. [1] point out that a future EU Ship Sanitation Program would benefit considerably from the experience of the US VSP in inspection and disease surveillance. Unfortunately, many ports sometimes want additional information and insist on country-specific reports. Most cruises involve more than one country, and to

remodel the continuous AGE surveillance log before each port to comply with special local demands is demoralizing, causes confusion, and creates a lot of extra work. During an AGE outbreak there is certainly no time for changing log routines between ports. Hence, it seems like a reasonable call from the ships that one AGE surveillance log for reporting to public health agencies ashore should be **universally applicable**; it must be the same for every port worldwide. And for practical reasons all public health agencies should put national pride aside and use – or at least accept – the AGE surveillance log from CDC's VSP for their reports, not because the US log is perfect, but because it has proven good enough for the public health agency with the longest and most extensive experience in this field, and because most of the world's cruise community are already familiar with the US log and use it routinely.

In conclusion, to prevent and handle outbreaks of AGE on passenger ships, the medical staff aboard must maintain a detailed AGE surveillance log, keep key personnel informed about all changes, and report required data to public health authorities ashore prior to port arrival. As most cruises involve more than one country, one standardized AGE surveillance log should be universally applicable for reporting to public health agencies ashore. As all medical personnel on ships that have visited a US port are familiar with CDC's well-established AGE surveillance log and mandatory reporting system, health authorities in all ports worldwide should accept CDC's AGE log for their reports. The use of software based on CDC's VSP may simplify patient tracking and administrative chores.

1. Mouchtouri VA, Nichols G, Rachiotis G et al. State of the art: Public health and passenger ships. *Int Marit Health* 2010; 61.
2. Vessel Sanitation Program Operations Manual 2010 (Draft). U.S. Public Health Service, Centers for Disease Control and Prevention, National Center for Environmental Health, Vessel Sanitation Program, Atlanta, GA and Fort Lauderdale, FL. Available at www.cdc.gov/nceh/vsp (accessed 25 May 2010).