

National Outbreak Reporting System (NORS): Water-General

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1 INTRODUCTION

This training session will provide an overview of the Water-General tabs for a NORS report, which are shared by all four types of waterborne disease outbreak reports that are entered in NORS. This training assumes that you know how to log in and use the main features of NORS, and have completed the training for the General section. Remember that the General-Lab tab in the General section training is not used for waterborne disease outbreak reports. We'll talk more about how to report clinical specimen data in this training and water sample laboratory data in the Water Sample Laboratory Data training.

2 WATER-GENERAL – ONLINE GUIDANCE AND RECORD STATUS

First, let's go to the Water-General section and look at the menu items at the top of the screen. Click on the word Guidance in the Help menu to open the guidance document. We will not go over every detail covered in the guidance during this training but remember that it is a resource when you are entering waterborne disease outbreak reports. To go back to the outbreak report, click the back arrow on your web browser.

Let's also take a look at the Record Status field, which is after the CDC ID. If this report had a status history, we could see it by clicking on the word Active, which is the current status. Since it doesn't, the status pop-up screen is blank for this report.

We will close the window to start entering data. Remember that if you are not actively using the system, you will be logged out after 15-20 minutes and you will lose any unsaved changes.

3 WATER-GENERAL TAB

We will fill in the Water-General and the Water-Clinical Specimens tabs. Disregard Water – Admin Page 1 and Water – Admin Page 2. These tabs contain general administrative fields used by CDC.

Let's create a report for a recreational water outbreak associated with a hotel pool. In the Type of Water Exposure section, we need to click the radio button next to 'Water intended for recreational purposes – treated venue'. Other options for type of water exposure are: water intended for recreational purposes – untreated venue, water intended for drinking, and water not intended for drinking or without a known intent.

Next, go to the Geographic Location section and enter 78 as the percent of primary cases in this outbreak who live within the reporting state.

Then go to the Associated Events section. This section asks if the outbreak was associated with an event or gathering, the type of event or gathering and its date range. Let's check the radio button next to 'yes' and select 'Wedding' from the drop down list. If we needed to enter another event, we could add it using the process demonstrated in the General training. For every list that allows you to add values, check carefully first to make sure that the value isn't already listed, and spell the new entry correctly so that other NORS users can find it if they ever need it.

Let's enter a Start Date as January 9, 2009 and an End Date as January 11, 2009. Type the numbers in directly or use the calendar function.

Next go to the Symptoms section to describe groups of symptoms. All of the tables in the waterborne disease reporting sections of NORS share common features for entering, editing and deleting data. Below each table heading you will see a link that begins with the word 'Add...', and when you click on that link, a data entry section will appear directly below it.

For this table, we will click 'Add Symptom' to report on 18 people who had diarrhea, nausea and/or vomiting. First, select 'gastrointestinal symptoms/condition', type in 18 and then click 'Save'. To edit the data row, click 'Edit' at the left of the row, make your changes, and click 'Save' again. To delete the row, click 'Delete'. Lastly, to add another row and then cancel it before saving it, click 'Add Symptom', enter data or leave the fields blank, and click 'Cancel'.

The next section is Route of Entry. Select one route of entry, such as 'ingestion', by clicking on the word in the list. Select more than one by using the CTRL key. If you do not know, or only slightly suspect a route of entry, select 'Unknown'.

The Epidemiologic Data section contains questions and a data table to summarize epidemiologic activities or findings. First, type in the estimated total number of persons with primary exposure. Use the actual number, if known. Let's enter 113.

Next, if an epidemiologic study, such as a cohort or case-control study was completed, click the radio button next to 'Yes' to report that data were collected from comparison groups.

If responding No or Unknown, answer if water was the only common source shared by ill persons. If water is only suspected as the only common source, select 'unknown'.

Next, assume a study was completed. We will click 'Add Exposure' to fill in the Epidemiologic Data table, select 'Pool – swimming pool' for the Exposure, and enter the following numbers in the fields for total number exposed, total number of exposed who became ill, total number not exposed, and total number not exposed who became ill: 101, 15, 78, 3. Let's enter an odds ratio of 4.36 and a p-value of 0.02. NORS will not accept the symbols for 'greater than' or 'less than'. There are also fields for a relative risk or a confidence interval, however, the confidence interval field only appears if it has been reported that a study was conducted. Note that NORS will automatically calculate the attack rate when you click 'Save' (*attack rate=14.85*).

In the last two epidemiologic data fields, report the attack rates for residents of the reporting state and non-residents of the reporting state. Fill out these last two attack rates with reference to the exposure in the data table that was most strongly associated with the outbreak (*14.00, 15.67*).

Next, click on the Water-Clinical Specimens tab to save the data in this tab and go to the next tab.

4 WATER-CLINICAL SPECIMENS TAB

If no clinical specimens were collected, answer ‘no’ to the first question in Water-Clinical Specimens, save this tab and go to the next part of the report. In this example, we will answer ‘yes’ and report in the next question that 12 people provided specimens.

In the Specimen Description table, we will add a new row and select ‘stool’ from the Specimen Type pick list. The Specimen Subtype field will be blank. Only fill in this field if ‘autopsy’ or ‘biopsy’ specimens are collected. Let’s select ‘parasites’ in the Tested for field and click ‘Save’. If the specimens were tested for other pathogens, we could add a data row for each type.

For the Etiology table, fill in positive test results and fill in negative findings if tests for a specific pathogen were negative, as described next. You can report an outbreak with more than one etiology but let’s use an example with one etiologic agent. We will discuss two rows describing positive test results for *Cryptosporidium hominis* and one row describing negative test results for *Giardia*.

Start by clicking ‘Add Etiology’ and see that the data entry fields are stacked as three lines. To report the most general test results for *Cryptosporidium*, open the alphabetical pick list for Genus and either scroll through it or type the first few letters of *Cryptosporidium* to find it.

Skip down to the next line of data. The Specimen Type will be ‘stool’ and we will leave the subtype blank again. ‘Confirmed as etiology?’ will not be checked off because we will report the species that was implicated in the outbreak in the next row. When you confirm the etiologic agent for an outbreak, confirm only the most detailed description of the etiologic agent that is available.

Concentration and Unit are blank because the data represent multiple specimens. In some other examples, such as results for a single specimen, ‘Concentration’ and ‘Unit’ should be entered.

In the final line of data, the ‘Test Type’ used by the laboratory was ‘microscopy’. Let’s report that 12 people were tested and the ‘total number of people positive’ was also 12.

Next, we will click ‘Save’. Due to a technical error, not all fields that were filled out appear in the saved row, however, this will be fixed by the time that you begin entering your own waterborne disease outbreak reports. If we were to add a new row to describe a subset of specimens, we would enter ‘*Cryptosporidium*’ for the genus and ‘*hominis*’ for the species. In this example, we should indicate that *C. hominis* was the etiologic agent for the outbreak and check ‘Confirmed as etiology?’. Specimen Type would be ‘stool’, and the Test Type might be ‘DNA or RNA Amplification/Detection’. Let’s say that seven people of the 12 people in the first row were tested and seven tested positive.

Let’s consider how we could add a final row to show that specimens were tested for *Giardia*. In this data row, we would use the same process as before but let’s say that 11 people were tested for *Giardia* and zero tested positive.

Results from advanced tests, such as PFGE or MLVA, can be reported in the Isolates table. Use this table if a state laboratory completed the testing, so that the test results can be referenced back to their records. If the laboratory is part of the PulseNet program, this table will also help you to associate the outbreak report with data in the PulseNet system.

This is the end of the training for the Water-General section. Please refer to the online guidance or contact NORSadmin@cdc.gov with feedback or additional questions. (*Click on Save Changes and then Click on the Logout button*)