Line List Guidance

ISLHD PUBLIC HEALTH UNIT pLANNING tEAM

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# Purpose

The purpose of this document is to outline the importance of line listing for outbreak management. It outlines the importance of entering accurate information into a line list and will briefly discuss how to interpret epidemic curves.

# Audience

The intended audience for this document is facility managers who are currently experiencing an outbreak within their facility.

# Abbreviations

|  |  |
| --- | --- |
| DSP | Disability Service Provider |
| ISLHD | Illawarra Shoalhaven Local Health District |
| OMT | Outbreak Management Team |
| PHU | Public Health Unit |
| PPE | Personal Protective Equipment |
| RCF | Residential Care Facilities |

# Line lists use in outbreak management

## What is a line list?

A line list or illness register is a critical piece of information that the Public Health Unit and the facility can use to help guide outbreak management. They are used across multiple facilities including Residential Care Facilities (RCF’s) and childcare centres.

A line list provides facilities with appropriate key contacts and collects critical information about **ALL** people who work/attend/reside at a facility in outbreak.

Information collected includes the following;

* Risk Classification status (Low, Moderate, High, Active Case etc.)
* Identifying factors (Full name, DOB etc.)
* Aboriginality status
* Location within a facility
* Staff Occupation
* Testing regimes
* Outcome factors (seen a doctor, hospitalised, deceased)

*Note:* Please refer to Appendix 1 for a detailed definitions of columns within the line list. A line list should include information on **ALL** people who work/attend/reside at a facility regardless of infection status.

## 4.2 Why is a line list important for outbreak management?

While a line list may require dedicated time to complete, it is beneficial for the facility manager, as it enables them to;

* Stay informed of the current situation.
* Understand their residents/participants/staff health status.
* Understand where transmission is occurring, which can aid in response planning and managing, e.g. relocating and/or cohorting positive/negative residents and prompts staff to check for breaches in PPE or procedures.
* A populated line list generates an epidemic curve which can help describe what is occurring, why it is occurring, and prevent the same situation from occurring again.
* Have information kept in one location so it can be easily retrieved and reviewed in times of intense activity.
* Have access to appropriate PHU contact information so they can be supported.

A line list is critical to understanding an outbreak, it enables the PHU to;

* Produce epidemic curves that describe the type, magnitude and longevity of an outbreak, when required.
* Identify potential sources of transmission.
* Inform outbreak control measures and evaluate their effectiveness.
* Monitor the current health status of those within a facility.
* Facilitates communication and reporting of outbreaks if your facility may require an Outbreak Management Team (OMT) Meeting.

Handy Tip: Pre-fill your line list with your residents/participants details prior to an outbreak occurring

# Public Health Unit Line Lists

The line list the PHU will send to your facility is dependent on the current notifiable disease your facility has been exposed/impacted by. Please refer to the appropriate outbreak below;

**5.1** Respiratory Illness outbreaks

**5.2** Gastroenteritis outbreaks

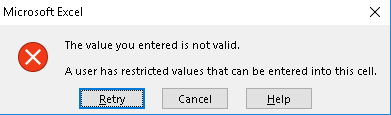
## Respiratory illnesses outbreaks

Currently the PHU have created a line list for common respiratory illnesses including COVID-19, Influenza A, Influenza B, Rhinovirus and Respiratory syncytial virus (RSV). The intention to integrate respiratory illnesses was to ease the burden on facilities having to complete two or more separate line listings.

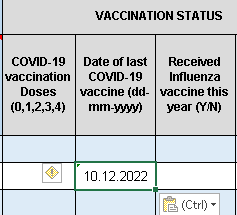
### Line List Features: Data validations

The line list has been built to allow cells to be filled out using drop down options or date formats these are known as [data validations](https://support.microsoft.com/en-us/office/apply-data-validation-to-cells-29fecbcc-d1b9-42c1-9d76-eff3ce5f7249)[[1]](#footnote-1). There are limited cells with free text fields. Enabling multiple data validations reduces the possibility for users to type in the wrong data (e.g., someone writing ‘positive’ in a date of test column).

When someone enters the wrong information into a data validated cell, they will be prompted with this box;



When someone enters information into a cell using copy and paste, they will prompted with these small boxes:



This is often caused by cut and pasting information into cells. If you do this, please use ESC or Undo and then type in the date manually (insert the date to reflect DD/MM/YYYY or DD-MM-YYYY if required).

It is important that the data validations are not altered, as they are there to reduce the amount of human errors made within the line list. If any errors occur please contact the PHU ([ISLHD-PHU-Outbreaks@health.nsw.gov.au](mailto:ISLHD-PHU-Outbreaks@health.nsw.gov.au)).

### Line List Features: Colour coding

[Conditional formatting](https://support.microsoft.com/en-us/office/highlight-patterns-and-trends-with-conditional-formatting-eea152f5-2a7d-4c1a-a2da-c5f893adb621#:~:text=conditional%20formatting%20rule-,Select%20the%20range%20of%20cells%2C%20the%20table%2C%20or%20the%20whole,want%2C%20and%20then%20click%20OK.)[[2]](#footnote-2) enables the use of automatic colour coding within excel. This can help us determine a person’s current health status within your facility. You do not need to highlight the spreadsheet, as it does it for you.

There are a number of different colour codes used within the line list these include;

|  |  |  |
| --- | --- | --- |
| **Colour** | **Meaning** | **Generated from which column?** |
| Purple | ***NOT*** infectious whilst at facility | Infectious whilst at Facility (N) |
| Grey | Deceased | * Current Status= deceased * Date deceased   (dd-mm-yyyy) |
| Green | Recovered Case | Current Status= Recovered Case |
| Yellow | Hospitalised | * Current Status= Hospitalised * Hospitalised (Y) |
| Pink | Active Case | * Initial Status= Active Case * Current Status= Active Case |

Note: In this table, the order of the colours represents what meaning takes precedence. E.g. someone who is an active case will have their row highlighted yellow if they have been hospitalised.

## Gastroenteritis outbreaks

For gastroenteritis outbreak line lists for both residential care facilities and childcare centres, please refer to the [ISLHD Infectious Diseases webpage](https://www.islhd.health.nsw.gov.au/services-clinics/public-health-unit/infectious-diseases/outbreaks/line-list-resources).

### Line List Features

The gastroenteritis line list includes similar tabs to that of the respiratory illnesses line list which include residents/children, staff and tabs that pre populate an epidemic curve. The epidemic curve in this spreadsheet is pre populated from the ‘Date of onset of symptoms (dd-mmm)’.

Unlike the respiratory illnesses line list this does not include data validations within columns, therefore it is essential that the data is carefully reviewed to ensure it is correct before sending to the PHU.

# Requesting changes or guidance

Please reach out to the Public Health Unit if you require any further guidance completing your line list as we are here to support you. We do ask that if you require any changes to a line list that you do not attempt to alter the line list, e.g. extra columns, please contact the Public Health Unit for amendments;

**Illawarra Shoalhaven Local Health District Public Health Unit contact details:**

*Email:* [ISLHD-PHU-Outbreaks@health.nsw.gov.au](mailto:ISLHD-PHU-Outbreaks@health.nsw.gov.au)

*Phone:* (02) 4221 6700

*After Hours:* (02) 4222 5000 - ask for Public Health Officer on call

# Epidemic Curves

## What is an epidemic curve?

An epidemic curve is a visual representation that shows the trends of disease in an outbreak. It helps to identify the source of transmission, case numbers, disease transmission trends and outbreak longevity.

## Why are epidemic curves used?

Epidemic curves help support both your facility and the PHU to understand particular transmission trends. They are also useful for quickly recognising inaccurate data entries. For example, when incorrect dates are entered into the line list, you will notice that the pattern of the disease spread will start to look unusual.

You should utilise this epidemic curve for an overall visual representation of the case numbers occurring within your facility. If you encounter further issues with the line list or epidemic curve, please check the data that you have entered into the spreadsheet first and if there is no resolution please contact the PHU on ([ISLHD-PHU-Outbreaks@health.nsw.gov.au](mailto:ISLHD-PHU-Outbreaks@health.nsw.gov.au)).

These epidemic curves are also useful to refer to in OMT meetings and can give you a quick overview of your current outbreak.

## How to interpret an epidemic curve and where they are located

In order to understand disease trends and transmission in an outbreak it is important that an epidemic curve can be interpreted correctly.

### Accessing the epidemic curve: Respiratory Illnesses Line List

To access the epidemic curve within the line list, click on the appropriate tab given your facilities current circumstance ‘COVID-19 Epi Curve’ OR ‘Influenza Epi Curve’ tab at the bottom of the spreadsheet. Along the x axis (horizontal axis) the variable is ‘Date of First Positive Test’.

The excel spreadsheet has multiple formulas set to organise/recognise the first positive test (if applicable) for each person within the line list across the three tabs (residents, staff and visitors). These first positive test dates will automatically populate into the epidemic curve, as you begin to fill out the line list.

The y axis (vertical axis) has a variable of the number of confirmed cases, this will count how many people have tested positive on a particular day (which is determined by the x axis). As you begin to fill out the line list this data will populate an epidemic curve.

If you notice that the title has the word ‘False’ presented, this means that you have not filled out the information at the top of the line list which includes the date, facility name and the number of residents/visitors/staff. Please enter this information to ensure the epidemic curve is labelled correctly.

### Accessing the epidemic curve: Gastroenteritis Line List

To access the epidemic curve within the line list, click on the ‘Epicurve Chart’ tab at the bottom of the spreadsheet. Along the x axis (horizontal axis) the variable is ‘Date of Onset’.

The excel spreadsheet has multiple formulas set to organise/recognise the date of symptom onset for residents and staff. These symptom onset dates once entered into the line list will populate an epidemic curve.

The y axis (vertical axis) has a variable of the number of cases, this will count how many people all have the same date of symptom onset (which is determined by the x axis). Once this data is entered the line list will automatically generate an epidemic curve.

# Appendices

## Appendix 1: Respiratory Line List Glossary

This glossary will help you understand and navigate your line list, it includes relevant columns that are represented in the Residents, Staff and Visitor tabs within the excel spreadsheet. If you require further assistance please contact the PHU Outbreak Management Team on ([ISLHD-PHU-Outbreaks@health.nsw.gov.au](mailto:ISLHD-PHU-Outbreaks@health.nsw.gov.au)).

|  |  |  |
| --- | --- | --- |
| Column Title | Explanation | Why is this useful to collect? |
| Risk Classification | | |
| Initial Status | Refers to the status of a person at the start of an outbreak.  (Please refer to the instructions tab for low, moderate & high risk classifications. This will help you determine the risk classifications of all the people in your facility/home.) | Allows the facility and PHU to understand the initial health status of all in outbreak. |
| Current Status | Refers to the status of a person each time you update the line list.  For example John was a high risk contact at the start of the outbreak however is now an active case, the initial status stays as high risk however the current status will change from high risk to active case.  (Please refer to the instructions tab for low, moderate & high risk classifications. This will help you determine the risk classifications of all the people in your facility/home.) | Allows the facility and PHU to understand the current health status of all participants in outbreak and help inform current disease transmission trends. |
| Infection Status | Refers to what infectious disease (if applicable) the individual has.  If an individual has a co-infection please select ‘COVID-19 & Other Infection’. | Allows the facility and PHU to understand what infectious disease is prominent within the outbreak. This will help guide and tailor outbreak response. |
| Last Exposure Date (dd-mm-yyyy) | Refers an individual’s last exposure with an infectious case.  **Last Exposure Date** column should be set to either: (1) the **Exposure Date** where there is a clear exposure event relevant to the individual; or (2) the **Initial Entry Date** of the visitor into the facility once it was placed into *outbreak status*  Please use forward slashes (/) when entering in dates do not use full stops (.) | Allows the facility and PHU to understand outbreak exposures and risk classifications. |
| Infectious whilst at facility (Y/N) | Refers to whether or not someone had been infectious whilst at the facility.  E.g. If a staff member has contracted an infectious disease in the community but has not yet returned to the facility and had not worked at the facility in the previous 48 hours of their positive COVID-19 test or 24 hours of their positive influenza test, then they would be classified as ‘N’.  However, if a staff member had tested positive at home but had worked at the facility in the previous 48 hours of their positive COVID-19 test or 24 hours of their positive influenza test, then they would be classified as ‘Y’. | Allows the facility and PHU to be notified if there have been any further exposures within a facility. |
| Identifiers | | |
| Firstname | Refers to the individuals **FULL** first name | Important for both facility and PHU to have accurate personal information. |
| Surname | Refers to the individuals **FULL** last name | Important for both the facility and PHU to have correct personal information. |
| Sex | Refers to the individuals gender | Important for both the facility and PHU to have correct personal information. |
| DOB | Refers to the individuals date of birth  Please use forward slashes (/) when entering in dates do not use full stops (.) | Important for both the facility and PHU to have correct personal information. |
| Aboriginality | Refers to an individual’s Aboriginal or Torres Strait Islander status | Important for both the facility and PHU to have correct personal information to ensure an appropriate assessment of is made for the individual. |
| Location-Resident specific | | |
| Current Location (Onsite; Hosp; Other) | Refers to the individual’s current location whether they are onsite, in hospital or other. | Important for facilities to know the location of their residents or staff, for outbreak management. |
| Address/Wing/Cottage | Refers to the individual’s current residence. | Important for facilities to know the location of their residents or staff, for outbreak management. |
| Room number | Refers to the individual’s current residence. | Important for facilities to know the location of their residents or staff, for outbreak management. |
| Is the resident interacting with other residents? | Refers to whether an individual is prone to wondering and interacting with other residents. | This can help inform whether there is increased risk of transmission within a facility. |
| Occupation & Outcome- Staff specific | | |
| Works at other facility (Y/N) (add name to comments) | Does the staff member work at a different facility? | Helps the PHU to manage exposure risks at other facilities. |
| Occupation Role | What is the staff member’s role whilst working at the facility? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Wing/Cottage attended | What wings/cottage does this staff member work in? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Last date worked (dd-mm-yyyy) | When was the last day that this staff member worked? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Date Furloughed (dd-mm-yyyy) | If this staff member was required to be furloughed what date did this occur? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Date return to work (dd-mm-yyyy) | If furloughed, when this staff did member return to working at the facility? | Can help both facility and PHU understand numbers of recovered staff or those who are at risk. |
| Visiting Information- Visitor Specific | | |
| Visiting client/participant | Who is the client/resident or participant this visitor has seen? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Relationship to client/participant (if applicable) | What is the relationship between the resident and the visitor?  E.g. Mum, Child etc. | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Resident's location Address/Wing/Cottage | Where does the resident who the visitor is visiting reside? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Room number | What is the room number of the resident the visitor is visiting? | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Visiting time & date (dd/mm/yyyy @ 24hr time) | **Visitor Time and Date** column should be updated to the most *recent entry into the facility by the visitor* (their test dates will provide a record of their previous entries) | Can help both facility and PHU understand modes of transmission or risk exposures. |
| Immunisation | | |
| COVID-19 vaccination Doses (0,1,2,3,4) | Refers to how many COVID-19 vaccinations the individual has had. | Can help both facility and PHU know level of risk associated with exposure for the individual. |
| Date of last COVID-19 vaccine (dd-mm-yyyy) | Refers to the administrated date of the last COVID-19 dose an individual has had. | Can help both facility and PHU know level of risk associated with exposure. |
| Received Influenza vaccine this year (Y/N) | Refers to whether an individual has had their influenza vaccine this year. | Can help both facility and PHU know level of risk associated with exposure. |
| Date of last Influenza vaccine (dd-mm-yyyy) | Refers to the administrated date of the last influenza dose an individual has had. | Can help both facility and PHU know level of risk associated with exposure. |
| Symptoms- click + to record symptoms | | |
| Symptomatic (Y/N) | Is the individual displaying any symptoms? | Can help facility and PHU understand health status of an individual. |
| Date of symptom onset (dd-mm-yyyy) | When does the individual recall having symptoms or have you as a manager noticed symptoms.  This can be left blank if the individual displays no symptoms. | Can help facility and PHU understand health status of an individual. |
| Testing- click + to record up to 15 tests | | |
| Date of test # (dd-mm-yyyy) | Refers to the date the individual ***took*** the test.  **NOT** the date they receive their results (only applicable if they take the test the same day as receiving the results). | Very important for facility and PHU to understand the testing regimes and to keep record of active cases. |
| Test # COVID-19 Result | What is the outcome of the individuals test result?  NA should only be used if the infectious disease was not tested for. | Very important for facility and PHU to understand the testing regimes and to keep record of active cases. |
| Test 1 ########## (respiratory illnesses) | Refers to the outcome of an individual’s test result.  NA should only be used if the infectious disease was not tested for. | Very important for facility and PHU to understand the testing regimes and to keep record of active cases. |
| Outcome | | |
| Seen by a doctor (Y/N) | Refers to whether an individual has been seen by a doctor, this can be in reference to antivirals, check-ups etc. | Can help facility and PHU understand health status of an individual. |
| Received Antivirals (Y/N) | Refers to whether an individual has received antivirals. | Can help facility and PHU understand health status of an individual. |
| Hospitalised (Y/N) | Refers to whether an individual has been admitted to hospital. | Can help facility and PHU understand health status and location of individuals within the facility. |
| Date hospitalised (dd-mm-yyyy) | Refers to the date someone had been admitted into hospital.  Please use forward slashes (/) when entering in dates do not use full stops (.) | Can help facility and PHU understand health status of an individual. |
| Date deceased (dd-mm-yyyy) | Refers to the date someone has passed away. Please **immediately** inform PHU of any deaths.  Please use forward slashes (/) when entering in dates do not use full stops (.) | Can help facility and PHU understand health status of an individual. |
| Extra Information | | |
| Health vulnerabilities and behaviours | Please record an individual’s health vulnerabilities or behaviours in this free text field. |  |
| Additional comments (PPE worn etc.) | Please record any additional comments that cannot be made in other cells. |  |

1. Microsoft 2022. Apply data validation to cells. Microsoft support; 2022. Available from: <https://support.microsoft.com/en-us/office/apply-data-validation-to-cells-29fecbcc-d1b9-42c1-9d76-eff3ce5f7249> [↑](#footnote-ref-1)
2. Microsoft 2022. Highlight patterns and trends with conditional formatting. Microsoft; 2022. Available from: <https://support.microsoft.com/en-us/office/highlight-patterns-and-trends-with-conditional-formatting-eea152f5-2a7d-4c1a-a2da-c5f893adb621#:~:text=conditional%20formatting%20rule-,Select%20the%20range%20of%20cells%2C%20the%20table%2C%20or%20the%20whole,want%2C%20and%20then%20click%20OK>. [↑](#footnote-ref-2)