mn DEPARTMENT OF HEALTH

Infection and Antibiotic Use Tracking Tool Instructions

This tracking tool allows facilities to document antibiotic use practices and outcomes related to antibiotics. Antibiotic use data to improve antibiotic stewardship efforts is important both for individual facility improvements and for public health action.

Infection and Antibiotic Use Tracking Tool Workbook (Excel) (https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/apxl.xlsx)

Resident Days Present

Resident days per month must be manually entered before any auto-calculations can be generated by Excel. Days present is defined as the number of residents who were present for any portion of each day of a calendar month in any resident care location.

For example, take the number of residents and total how many days each were present at the facility for the month:

- Resident 1: 30 days
- Resident 2: 8 days
- Resident 3: 22 days
- Total resident days: 30 + 8 + 22 = 60 resident days

Summary

The Summary sheet will provide you with summarized data after entering data into the monthly tracking sheets. This sheet contains two tables and five charts. **All data on this sheet automatically populates as data is entered on each monthly tracking sheet. Please do not manually delete or add data to these tables and/or charts as there are formulas associated with each table and chart.** The Total Days of Therapy table provides the total days of therapy per month as well as the rate per 1,000 resident days. There is also a corresponding chart below that will provide a visual representation of the data (note: days of therapy per 1,000 resident days for residents receiving prophylaxis is displayed as a separate line on this chart). The Infection Rates per 1,000 Resident Days table provides the total infection rate per 1,000 resident days by month for each infection type found in the line-list. There is a corresponding column chart that will provide a visual representation of this data as well.

There are three additional charts on the Summary sheet – Rx Origin, % Meeting Criteria, and Antimicrobial Class Utilization. The Rx Origination chart provides a visual representation of the percentage of prescriptions originating from five different settings. The % Meeting Criteria chart provides a visual representation of those meeting criteria for appropriate initiation of antibiotics. Lastly, the Antimicrobial Class Utilization chart provides a visual representation of the total percentage that each class of antibiotic is being utilized throughout the year.

Disclaimer: The Minnesota Department of Health does not require that specific criteria be used when making a diagnosis. The criteria discussed below are examples.

Monthly Tracking Sheets

Begin a new line for each infection being tracked. You may enter a resident name more than once if there is more than one infection. If the resident is prescribed more than one antibiotic, begin a new line for that resident, but leave the Infection Type (column F) blank as you do not want to count the infection twice.

RESIDENT INFORMATION

Title	Column	Instructions
Unit Name	A	Indicate the unit where the resident is located.
Resident Name	B	Indicate name of resident.
Room #	C	Indicate room number assigned to resident. Enter multiple locations if resident moved to another room.
Admit Date	D	Indicate date of first admission to the facility. This date remains the same even if the resident leaves the facility (e.g., transfers to another facility) for short periods of time (<30 consecutive days). If the resident leaves the facility and is away for ≥30 consecutive days, the date of first admission should be updated to the date of return to the facility.

CLASSIFICATION

Title	Column	Instructions
Existing Infection from Previous Month(s)? Yes/No	E	Indicate if infection is an existing infection from previous month using the drop-down. If the infection is existing from the previous month and has been previously recorded on this line-list, do **not** fill in column F (Infection Type). This will prevent the infection from being counted twice. Please enter the requested information in the antimicrobial starts section to obtain accurate data regarding days of therapy (DOT).
Infection Type	F	Select an infection type using the drop-down arrow. If the type of infection is not found in the drop-down list, select "other."
Body System of Infection	G	System of body that the infection is associated with. This field will be auto-populated when an infection type is selected. You will not be able to enter free-text data in this field.
Surveillance definition met? Yes/No	H	Refer to Loeb and McGeer Criteria: A Practical Guide for Use in Long-term Care (PDF) to understand clinical and surveillance criteria.

INFECTION AND ANTIBIOTIC USE TRACKING TOOL INSTRUCTIONS

HISTORY

Title	Column	Instructions
Symptom(s)	I	Describe the symptom(s) associated with the infection.
Onset Date	J	Indicate the onset date (mm/dd/yyyy) of the signs and symptoms of the infection.
Device Type(s) (optional)	K	Indicate the device type associated with the infection using the drop-down arrow.
Date(s) of Insertion	L	Indicate the date (mm/dd/yyyy) that the device was inserted.
Date(s) of Removal	M	Indicate the date (mm/dd/yyyy) that the device was removed. If the device has not been removed, leave this field blank.
Device Days	N	Duration in days of device exposure (part of one day=one day). This field is auto-calculated.
Infection Risk Factors	O	Identify any risk factors (not including devices) associated with the infection (e.g., co-morbidities, chemotherapy, immunosuppressant medication, etc.).

DIAGNOSTICS (MICROBIOLOGY, OTHER LABS, RADIOLOGY)

Title	Column	Instructions
Diagnostic Performed? Yes/No	P	Indicate if diagnostic tests have been performed (i.e., lab, x-ray).
Test Date	Q	Indicate the date of collection or testing.
Type of Test	R	Indicate the type of test (i.e., urinalysis, chest x-ray).
Specimen Source	S	Identify the source of which the specimen was obtained using the drop-down list. If not applicable (i.e., x-ray), leave section blank.
Results (Organism colony counts for urine)	T	Example: UTI-At least 10^5 cfu/mL of no more than 2 species of microorganisms in a voided urine sample, positive influenza, or abbreviated x-ray result.
Antibiotic Resistant Organism? Yes/No	U	Indicate if antibiotic resistance is confirmed using drop-down arrows.
If Yes, Specify	V	If antibiotic resistance is confirmed, please specify.

ANTIMICROBIAL STARTS

Title	Column	Instructions
Antibiotic Name	W	Indicate the antibiotic initiated using the drop-down list. The list of drugs in this list were obtained using the National Healthcare Safety Networks (NHSN) List of Antimicrobials. For more information, refer to CDC: NHSN Antimicrobial Use and Resistance (AUR) Options. Antifungal and antiviral drugs are not included in this list.
Class	X	This field will auto-populate when the drug name is selected. You are not able to enter free text in this field.
Dose	Y	Indicate the dose of the drug being administered.
Route	Z	Indicate the route of which the drug is being administered using the drop-down list.

Title	Column	Instructions
Frequency	AA	Indicate the frequency of which the drug is being administered.
Provider	AB	Enter name of provider who prescribed the antibiotic.
Antimicrobial Rx Origin	AC	Indicate the health care setting where the antibiotic Rx originated using the drop-down list (ED, Clinic, Hospital, LTCF, or Other).
Antibiotic Start Date	AD	Indicate the date (mm/dd/yyyy) of which the antibiotic was initiated. If the drug was started during the previous month, enter the first day of the current month.
Antibiotic End Date	AE	Indicate the date of which the antibiotic was ended. If the drug is still being used, leave this field blank. In the event that antibiotic use crosses over to the following month, enter the last day of the month in which the antibiotic was initiated. You will then enter the date for the first day of the month for the following month on its designated sheet. For example, if a resident begins an antibiotic on 1/2/24 but does not complete the antibiotic until 2/12/24, you will enter 1/2/24 as the start date and 1/31/24 as the end date on the "January" sheet. You will then enter 2/1/24 as the start date on the "February" sheet while leaving the end date blank until the antibiotic is no longer being used. Following these instructions will ensure that you receive an accurate number when calculating the Total Days of Therapy for each month.
Total Days of Therapy	AF	Total number of days receiving an antibiotic. This field is auto-calculated when start date and end date are entered.
Meets Criteria? Yes/No	AG	Indicate if criteria for appropriate initiation of antibiotics are met. MDH does not endorse any specific criteria for initiating antibiotics. Example: Refer to Minimum Criteria for Initiation of Antibiotics in Long-term Care Residents for clarification.
Antibiotic Reassessment (Antibiotic "Time-outs") Performed? Yes/No	AH	An antibiotic "time-out" prompts a reassessment of the continuing need and choice of antibiotics when the clinical picture is clearer and more diagnostic information is available.
Other Antimicrobials Prescribed Name	AI	Select the name of the other antimicrobial prescribed using the drop-down list. This list contains antiviral and antifungal drugs.
Other Antimicrobials Prescribed Class	AJ	Identifies the class of the other antimicrobial drugs a resident may be prescribed. This field is auto-populated when another antimicrobial drug name is selected.

OTHER INFORMATION

Title	Column	Instructions
Transmission-based Precautions Required? Yes/No	AK	Indicate if transmission-based precautions are required.
If Yes, Specify	AL	If transmission-based precautions are required, indicate the type using the drop-down list.
Date Symptoms Resolved	AM	Indicate the date when symptoms were no longer present.
Comments	AN	Open text field to allow for comments and notes relevant to the resident.

Printing of Data and Charts

Printing lengthy spreadsheets such as this can be difficult as they are often too long to fit on a single page. For this reason, we recommend using the Print Screen key or the Snipping Tool to capture screenshots of reports and data you are interested in presenting.

[Microsoft Support: Copy the window or screen contents (https://support.office.com/en-us/article/copy-the-window-or-screen-contents-98c41969-51e5-45e1-be36-fb9381b32bb7)](https://support.office.com/en-us/article/copy-the-window-or-screen-contents-98c41969-51e5-45e1-be36-fb9381b32bb7)

Once you have an image of your screen, you are now able to save and print the image as is, copy and paste the image into other programs such as Word or PowerPoint, or include the image in a report with other data or images.

Resources

- [Minnesota Antimicrobial Stewardship Program Resources for Long-term Care Facilities (https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/index.html)](https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/index.html)
- [Infection and Antibiotic Use Tracking Tool Workbook (Excel) (https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/apxl.xlsx)](https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/apxl.xlsx)
- [Loeb and McGeer Criteria: A Practice Loeb and McGeer Criteria: A Practical Guide for Use in Long-term Care (https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/loebmcgeer.pdf)](https://www.health.state.mn.us/diseases/antibioticresistance/hcp/asp/ltc/loebmcgeer.pdf)
- [Minimum Criteria for Initiation of Antibiotics in Long-term Care Residents (https://www.health.state.mn.us/diseases/antibioticresistance/hcp/ltcabxcard.html)](https://www.health.state.mn.us/diseases/antibioticresistance/hcp/ltcabxcard.html)
- [CDC: NHSN Antimicrobial Use and Resistance (AUR) Options (https://www.cdc.gov/nhsn/psc/aur/index.html)](https://www.cdc.gov/nhsn/psc/aur/index.html)

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For technical assistance or to obtain this information in a different format, contact the MDH Healthcare-Associated Infections and Antimicrobial Resistance Section at health.HAI@state.mn.us or 651-201-5414.