## Antibiotic Use by Prescriber in Days of Therapy (DOT)

Description: These instructions will demonstrate step-by-step how to request, prepare, and analyze prescriber-specific antibiotic use data in days of therapy (DOT) to provide targeted education and feedback to clinicians at your facility.

Determine which data fields to request from your local data source:

- Because antibiotic use data by prescriber are not available directly through the NHSN, a report must be created using local sources such as your electronic medical record (EMR), local data warehouse, or with the assistance of your information technology (IT) colleagues.
- 2. To make the most of these data, it is important to draft a list of desirable data fields needed to analyze and prepare prescriber-specific antibiotic use feedback and benchmark reports.
- 3. Below is an example of common data fields that can be used in the preparation of prescriber-specific antibiotic prescribing feedback with benchmarking. Please note that this list is not exhaustive and that other data fields can be included to tailor this report to your local facility.

Data Field	Description
PrescriberID	De-identified code linking prescriber to order in the EMR. This field could be useful to blind antibiotic prescribing feedback reports if presenting
	benchmarks comparing one prescriber to a group.
LastName	Prescriber's last name
FirstName	Prescriber's first name
PrescriberType	e.g., hospitalist, intensivist, surgeon, family medicine, etc.
TotalAntimicrobialDOT	<ul> <li>This field captures the total number of antimicrobial days of therapy (DOT) (e.g., antibacterials, antivirals, and antifungals) in a specified period of time.</li> <li>Also number of doses, number of new starts, number of patients receiving agent, etc. A measure of antibiotic use by prescriber, and you can use multiple different measures.</li> </ul>
TotalAntibacterialDOT	Antibacterial DOT prescribed during specified time period
TotalAntifungalDOT	Antifungal DOT
POAntibacterialDOT	Oral antibacterial DOT
IVAntibacterialDOT	Intravenous antibacterial DOT
BS-HospOnsDOT	Broad-spectrum agents for hospital-onset infections DOT
BS-CommOnsDOT	Broad-spectrum agents for community-onset infections DOT
AntiMRSADOT	Anti-MRSA agents (e.g., vancomycin IV, daptomycin, linezolid, ceftaroline, tedizolid, dalbavancin, oritivancin, etc.)

**Table 1**. Common Data fields to Request to Prepare Prescriber-specific Antibiotic Use Reports

AntiPsABLDOT	Anti-pseudomonal beta-lactams (e.g., pip/tazo, cefepime, ceftazidime,
	meropenem, etc.)
FQDOT	Fluoroquinolones
HighRiskCDIDOT	Agents posing the highest risk for C. difficile infection
RestrictedAgentDOT	This data field includes targeted or restricted agents at your local facility
	(e.g., ceftazidime/avibactam, ceftolozane/tazobactam, etc.)

4. In addition to the data fields listed in Table 1, it is possible to request other data fields to produce advanced prescriber feedback reports as shown in Table 2. While these data fields are not necessary to provide basic antibiotic prescribing feedback, they may be useful to identify additional opportunities for improvement at your facility.

**Table 2.** Advanced Data Fields for Antibiotic Prescriber Feedback

Data Field	Description
ICU_DOT	Antibiotic DOT administered in an intensive care unit
NonICU_DOT	Antibiotic DOT administered in a non-intensive care unit
ED_DOT	Antibiotic DOT administered in an emergency department

5. Once your list of data fields are drafted, it is recommended to transfer these fields into an Excel Spreadsheet, as shown below, to share with your local informatics colleagues.

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6. Once you finalize your data fields and discuss options to capture antibiotic use data by prescriber with your local informatics experts, identify a date range and generate the data

report. For this example, we will evaluate antibiotic prescribing by prescriber for a 6-month period. The data and names shown below are fabricated.

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7. Now that data are available, consider evaluating overall antibacterial DOT by prescriber. To display the data in a bar graph, simply highlight the column B (prescriber last name), press and hold control, and highlight column E (total antibacterial DOT).

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8. Once the two desired columns are highlighted, click "insert" and select the desired graph/figure.

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9. A graph will be generated with the desired data, and you can sort the 'total antibacterial DOT' column by ascending or descending to change the display of the data, as shown below.

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10. This process can be repeated for all antimicrobial categories with available data.