

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:

1. 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.

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

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	This field captures the total number of antimicrobial days of therapy (DOT) (e.g., antibacterials, antivirals, and antifungals) in a specified period of time. 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.
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, oritavancin, etc.)

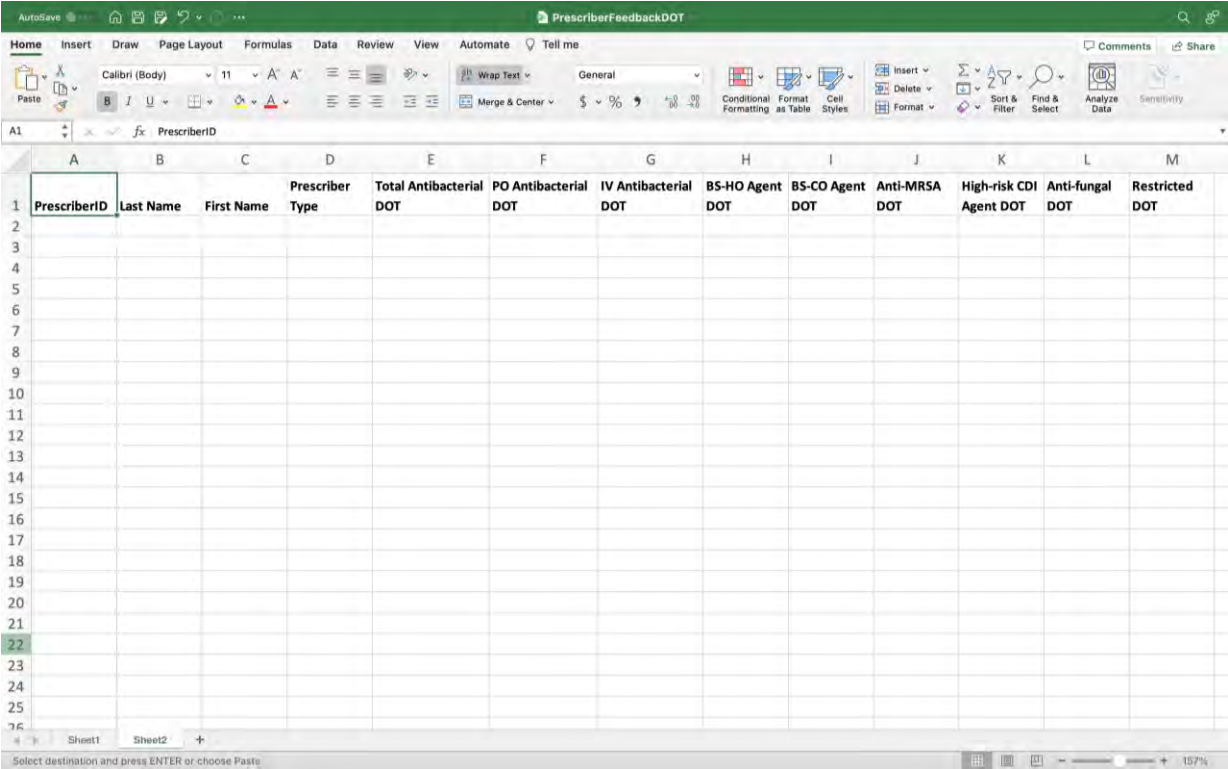
AntiPsABLDOT	Anti-pseudomonal beta-lactams (e.g., pip/tazo, cefepime, ceftazidime, meropenem, etc.)
FQDOT	Fluoroquinolones
HighRiskCDIDOT	Agents posing the highest risk for C. difficile infection
RestrictedAgentDOT	This data field includes targeted or restricted agents at your local facility (e.g., ceftazidime/avibactam,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



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

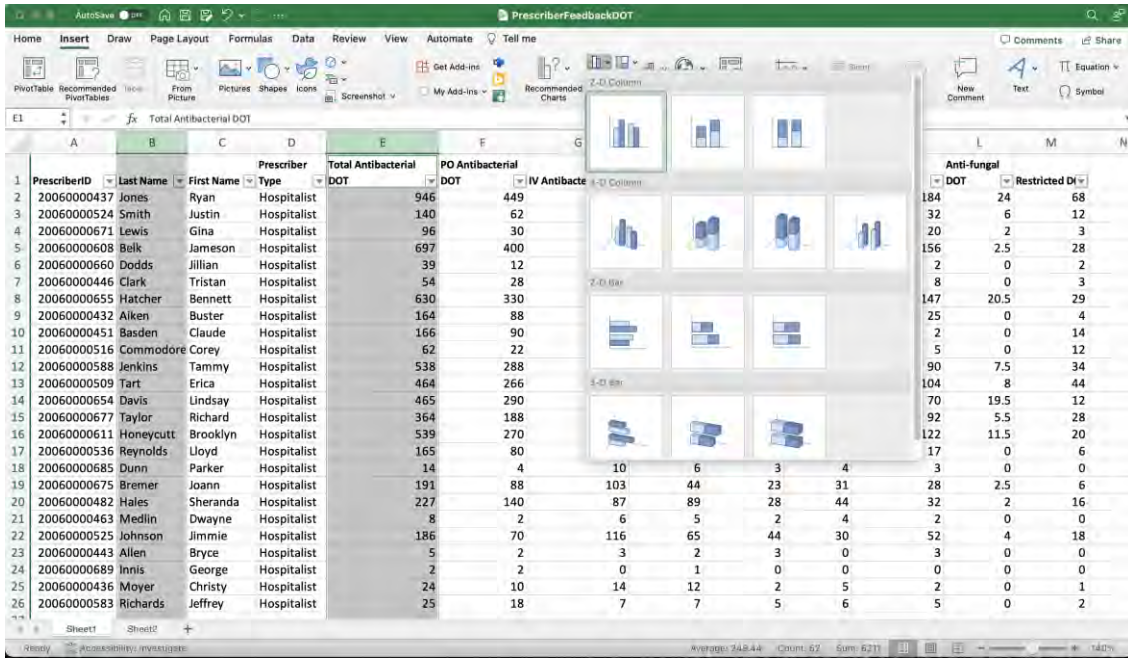
report. For this example, we will evaluate antibiotic prescribing by prescriber for a 6-month period. The data and names shown below are fabricated.

PrescriberID	Last Name	First Name	Type	Total Antibacterial DOT	PO Antibacterial DOT	IV Antibacterial DOT	BS-HO Agent DOT	BS-CO Agent DOT	Anti-MRSA Agent DOT	High-risk CDI Agent DOT	Anti-fungal DOT	Restricted DOT
20060000437	Jones	Ryan	Hospitalist	946	449	497	397	136	126	184	24	68
20060000524	Smith	Justin	Hospitalist	140	62	78	32	20	13	32	6	12
20060000671	Lewis	Gina	Hospitalist	96	30	66	41	16	10	20	2	3
20060000608	Belk	Jameson	Hospitalist	697	400	297	216	151	60	156	2.5	28
20060000660	Dodds	Jillian	Hospitalist	39	12	27	17	2	17	2	0	2
20060000446	Clark	Tristan	Hospitalist	54	28	26	7	8	7	8	0	3
20060000655	Hatcher	Bennett	Hospitalist	630	330	300	208	106	61	147	20.5	29
20060000432	Aiken	Buster	Hospitalist	164	88	76	38	25	20	25	0	4
20060000451	Basden	Claude	Hospitalist	166	90	76	84	2	34	2	0	14
20060000516	Commodore	Corey	Hospitalist	62	22	40	26	5	17	5	0	12
20060000588	Jenkins	Tammy	Hospitalist	538	288	250	179	75	82	90	7.5	34
20060000509	Tart	Erica	Hospitalist	464	266	198	115	88	57	104	8	44
20060000654	Davis	Lindsay	Hospitalist	465	290	175	239	31	66	70	19.5	12
20060000677	Taylor	Richard	Hospitalist	364	188	176	96	81	44	92	5.5	28
20060000611	Honeycutt	Brooklyn	Hospitalist	539	270	269	204	99	73	122	11.5	20
20060000536	Reynolds	Lloyd	Hospitalist	165	80	85	54	17	39	17	0	6
20060000685	Dunn	Parker	Hospitalist	14	4	10	6	3	4	3	0	0
20060000675	Bremer	Joann	Hospitalist	191	88	103	44	23	31	28	2.5	6
20060000482	Hales	Sheranda	Hospitalist	227	140	87	89	28	44	32	2	16
20060000463	Medlin	Dwayne	Hospitalist	8	2	6	5	2	4	2	0	0
20060000525	Johnson	Jimmie	Hospitalist	186	70	116	65	44	30	52	4	18
20060000443	Allen	Bryce	Hospitalist	5	2	3	2	3	0	3	0	0
20060000689	Innis	George	Hospitalist	2	2	0	1	0	0	0	0	0
20060000436	Moyer	Christy	Hospitalist	24	10	14	12	2	5	2	0	1
20060000583	Richards	Jeffrey	Hospitalist	25	18	7	7	5	6	5	0	2

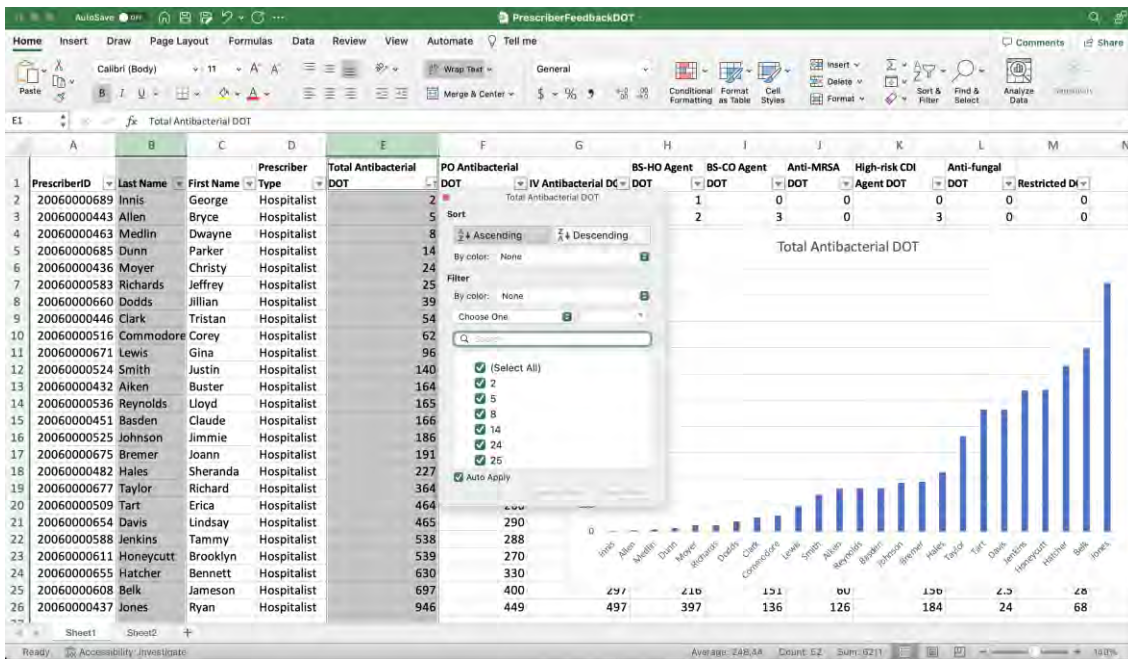
- Now that data are available, consider evaluating overall antibacterial DOT by prescriber. To display the data in a bar graph, simply highlight the column B (prescriber last name), press and hold control, and highlight column E (total antibacterial DOT).

PrescriberID	Last Name	First Name	Type	Total Antibacterial DOT	PO Antibacterial DOT	IV Antibacterial DOT	BS-HO Agent DOT	BS-CO Agent DOT	Anti-MRSA Agent DOT	High-risk CDI Agent DOT	Anti-fungal DOT	Restricted DOT
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20060000583	Richards	Jeffrey	Hospitalist	25	18	7	7	5	6	5	0	2

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



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.



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