Using the Test Cases

Created in Microsoft Excel format, Test Cases ensure, through a representative set of scenarios, that your Clinical Decision Support (CDS) engines are providing consistent and accurate Advisory Committee on Immunization Practices (ACIP) recommendations.

This quick guide provides the steps to:

- Understand the Test Cases Spreadsheet
- Filter Test Cases in Microsoft Excel
- Execute Test Cases

Understand the Test Cases Spreadsheet

To filter and execute Test Cases, you must first understand the Test Cases spreadsheet. Test Cases, provided in Excel format, contain four main sections:

1. Test Case Information
2. Patient Information
3. Immunization History
4. Forecast

Each row represents a single Test Case.

1 Test Case Information – These fields provide high-level information about the Test Case.

Column	Field Name	Description
A	CDC_Test_ID	Simple numerical identifier for the Test Case.
B	Test_Case_Name	Human-readable test name to briefly describe the Test Case.
BC	Vaccine_Group	The Vaccine Group being tested with the Test Case.
BD	Assessment_Date	Date which should be used during evaluation and forecasting rather than the current date. This is used to help with Test Cases which would become invalid over time.
BE	Evaluation_Test_Type	Used to categorize the Test Case. This will allow testers to focus in on categories of tests as needed. Evaluation test types are: Age: Below Absolute Minimum Age: At Absolute Minimum Age: At Minimum Age: At Recommended Age: Too Old

Column	Field Name	Description
BE (continued)	Evaluation_Test_Type	Interval: Below Absolute Minimum Interval: At Minimum Interval: At Recommended Gender: Invalid Administration No Doses Administered Single Antigen Administration Vaccine: Invalid Usage Vaccine: Off Label All Valid: Forecast Test Extra Doses
BF	Date_Added	Date the Test Case was created. Date format: MM/DD/YYYY (e.g., 01/01/2015).
BG	Date_Updated	Date the Test Case was changed. Date format: MM/DD/YYYY (e.g., 01/01/2015).
BH	Forecast_Test_Type	Used to categorize the Test Case. This will allow testers to focus on categories of tests as needed. Forecast test types are: Recommended based on age Recommended based on interval Recommended based on minimum interval from invalid dose Recommended based on minimum interval from previous dose (catch-up) Recommended based on minimum interval from live virus vaccine Recommended based on seasonal start date Not Recommended: series complete Not Recommended: too old Not Recommended: contraindication Not Recommended: immune
BI	Reason_For_Change	As Test Cases are changed, this field is used to document the reason the Test Case was changed.
BJ	Changed_In_Version	This field documents the most recent Test Case version.
H	Series_Status	Measure of the patients status in relationship to presumed immunity. Series Status values are: Not Complete Complete Immune Contraindicated

2   Patient Information – These fields provide specific non-immunization-related data important to the Test Case.

Column	Field Name	Description
C	DOB	Date of birth of the patient. DOB format: MM/DD/YYYY (e.g., 01/01/2000).
D	Gender	Gender of the patient. Either M or F (Male or Female)
E	Med_History_Text	Human readable description of a known relevant medical history associated with this patient which may indicate a contraindication or immunity.
F	Med_History_Code	Coded value which represents the medical history text.
G	Med_History_Code_Sys	Coding system associated with the coded value. In alignment with the CDC Implementation guide for HL7 messaging the coding systems include SNOMED CT (identified as SCT) and PHINVADS (identified as CDCPHINVS).

3   Immunization History – These fields provide the patient's immunizations and expected evaluation status for each immunization.

> ▶ **Tip:** *Each field ends in X in the following table. The X is a placeholder for 1 through 7 for each vaccine dose administered and the data associated with it. Vaccine names, CVX codes, and MVX codes are based on the following CDC resource: IIS Vaccine Code Sets (http://www.cdc.gov/vaccines/programs/iis/code-sets.html).*

| Column	Field Name	Description
I	Date_Administered	Date vaccine dose was administered. Date format: MM/DD/YYYY (e.g., 01/01/2000).
J	Vaccine_Name_X	Human readable trade name or the unspecified formulation of the vaccine.
K	CVX_X	Coded value to define the type of vaccine. Together with MVX the trade name can be inferred.
L	MVX_X	Coded value to define the manufacturer of the vaccine. Together with CVX the trade name can be inferred. If an unspecified formulation is used, no MVX is specified.
M	Evaluation_Status_X	Expected evaluation status (Valid, Not Valid, Extraneous) of the vaccine dose administered based on the ACIP recommendations. In the case of a combination shot, the Expected Evaluation Status is related to the Vaccine Group targeted by the particular Test Case. The other components of the combination vaccine are tested in their respective Vaccine Group Test Cases.
N	Evaluation_Reason_X	Provides further information as to why the dose administered was not valid. In the case of a combination shot, the reason is related to the Vaccine Group targeted by the particular Test Case. The other components of the combination vaccine are tested in their specific Vaccine Group Test Cases.
O-AX		Vaccine Doses Administered 2 through 7. This is a repetition of fields I - N.

4 Forecast – These fields provide the patient's forecasted dates, if appropriate, for the next target dose in the patient series.

> **Tip:** *Since each Test Case is focused on a single vaccine group, there will be one set of forecasted dates for the vaccine group.*

Column	Field Name	Description
AY	Forecast_#	Target Dose being forecasted. If Target Doses 1 and 2 have been satisfied, the Target Dose Number being forecasted would be Target Dose Number 3. If the patient no longer requires a dose (complete, immune, contraindication), the forecast_# is set to "-".
AZ	Earliest_Date	Earliest point in time which the next vaccine dose could be administered and still be considered valid. This does not include the 4-day grace period. Date format: MM/DD/YYYY (e.g., 01/01/2000).
BA	Recommended_Date	Date at which the next vaccine dose administered should be given. Date format: MM/DD/YYYY (e.g., 01/01/2000).
BB	Past_Due_Date	Date at which the patient is considered overdue for their immunization. Date format: MM/DD/YYYY (e.g., 01/01/2000).

Filter Test Cases in Microsoft Excel

1 Select the column you wish to filter from the Test Cases Excel file.

2 Click **Data > Filter.** The column refreshes displaying a drop-down menu arrow.
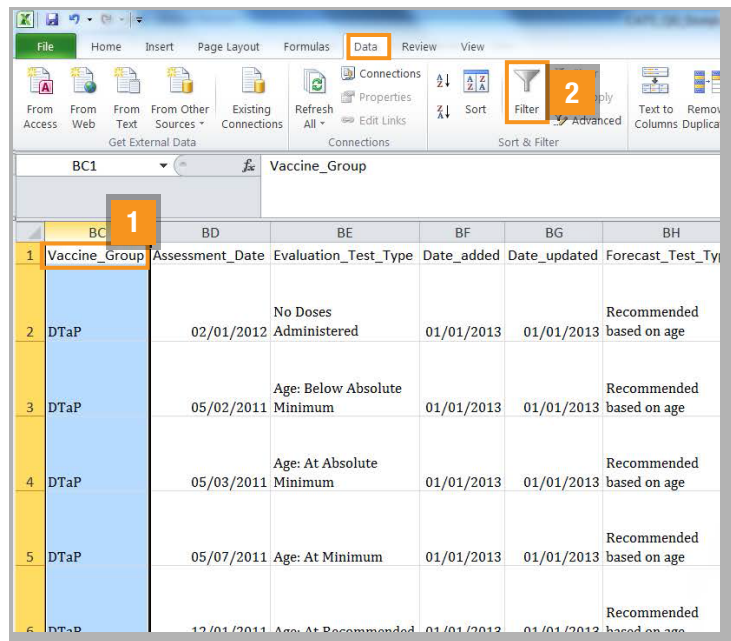
3 Click the drop-down menu arrow to display the **Text Filters.**

4 Check the box of each desired filter.

5 Click **OK.** The column refreshes displaying the results of the search.
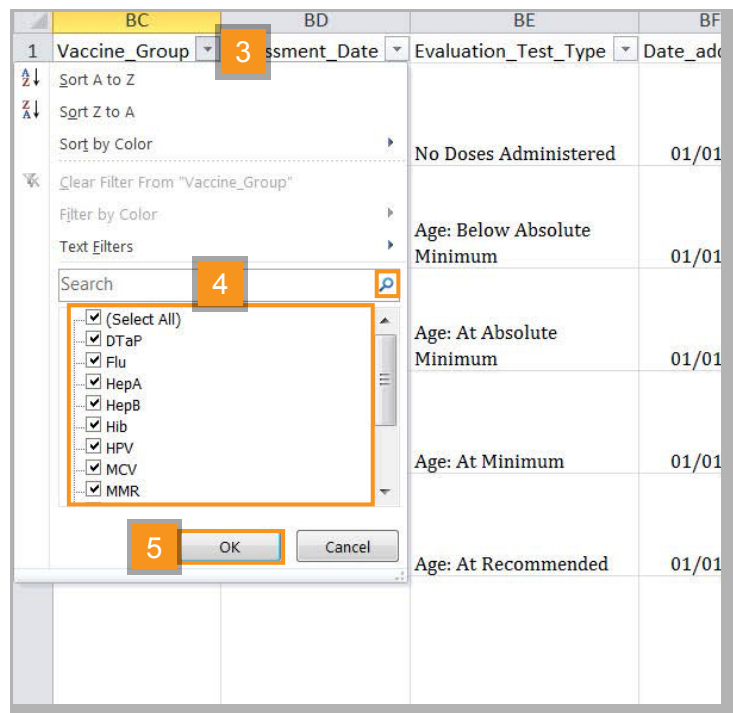
Execute Test Cases

1 **Determine the Test Cases to execute:** Select the Test Case information you would like to execute (e.g., the entire set of Test Cases, a specific vaccine group, a type of evaluation test, and/or a type of forecast test) by using the Filter option in Excel. **Note:** See the section above entitled "Filter Test Cases in Microsoft Excel."

2 **Prepare the Test Case data:** Convert the Test Case data into a format that loads in your CDS-engine, then export into the CDS engine preferred format.

3 **Execute the Test Cases:** Determine the steps to take before loading the Test Cases into your CDS engine.

> **Tip:** *These steps could vary greatly between systems. Some systems might be able to directly call their evaluation and forecasting engines, while other systems might require data to be loaded prior to executing the Test Cases in their evaluation and forecasting engines.*

4 **Validate the results:** Using the Test ID column, confirm you got the right answer.

www.cdc.gov/vaccines/programs/iis/cdsi.html