The MIIS Coverage Reports allows each provider site to evaluate the immunization coverage for its practice and compare site rates against the Massachusetts average and the Healthy People 2020 Goals to identify missed opportunities.

Five types of coverage reports are currently available in the MIIS:

- Standard Childhood
- Standard Adolescent
- Adolescent 13-17 years old
- Custom
- COVID-19

**Step 1 Navigation**

There are 2 ways to access Coverage Reports:

**Option A:**

⇒ Log in to the MIIS and click REPORTS from the Menu.

⇒ On the Reports landing page, click on the COVERAGE REPORTS button.
Running Coverage reports regularly is an evidence based strategy to improve immunization rates at your practice.

**Step 2 Select Type of Coverage**

⇒ The Coverage Report input parameter screen is displayed. A drop down menu allows you to choose the report you would like to run.
Step 3 Standard Childhood or Standard Adolescent

⇒ Specify the **Report Type**:

⇒ *Standard Childhood Coverage Report*—Evaluates patients aged 24 months to 35 months

⇒ *Standard Adolescent Coverage Report*—Evaluates patients aged 13 years (inclusive)

⇒ *Adolescent 13-17 years old Coverage Report*—Evaluates patients aged 13 years to 17 years.

⇒ Click the **Include patient listing tables** for an excel output that lists specific patients who are under immunized, have missed opportunities, and are up to date.

⇒ Specify a **Report Name** (optional) and **As of Date** (required) for your report.

⇒ Optionally, you can click the blue bar to **Limit Report By Patient Information** with specific criteria selected from the following categories:

⇒ **VFC Eligibility Status**

⇒ **Patient Race**

⇒ **Patient Ethnicity**

⇒ **Patient Status** (defaults to “Active”)

⇒ **City, State** or **Zip Code** of residence

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**Helpful Tips**

If your report criteria generate a large group of patients to be evaluated, this will take longer than usual to process. In such a scenario, a popup will appear stating:

*This report is expected to take several minutes to process. An email will be sent to you when the report is available for pickup in Delivered Reports. Click OK if you would like to proceed with receiving the report as a Delivered Report. Click Cancel to adjust your input parameters and submit again.*
The Standard Childhood & Adolescent Coverage Reports display the immunization coverage for the routinely recommended vaccines for patients within each age range.

The report includes:

- An assessment of immunization rates for recommended vaccine groups with two benchmarks for comparison: the Healthy People 2020 Goals and the overall Massachusetts rate (Graph 1 & Table 1).
Additional Coverage Criteria (Table 2):

- **Missed Opportunities (childhood):** patients not up-to-date for at least one of the recommended vaccine group, who received at least one other recommended vaccine between 16 and 24 months and who on that date were eligible but did not receive one of the nine recommended vaccines at that time.

- **Missed Opportunities (adolescent):** patients not up-to-date for at least one of the recommended vaccine groups as of the reference date, who received at least one vaccine between 11 and 19 years old, and who on that date were eligible, but did not receive one of the three recommended vaccines at that time.

- **Complete as of Reference Date:** patients up-to-date for all vaccine groups.

- **Under-Immunized as of Reference Date:** patients who did not receive the recommended number of doses for at least one of the vaccine groups.

- **Up To Date (childhood):** Patients that were assessed in the Coverage Report and were considered to be up to date for the Childhood Vaccine Series by 24 months of age.

- **Up To Date (adolescent):** The number of patients that were included in the assessment cohort AND are associated to the provider AND meet the measurements for all vaccines that are assessed in the Standard Adolescent Coverage Report EXCEPT for HepA and Flu

- **Late Up to Date: (childhood):** Patients that were assessed in the Coverage Report and were complete after the patient was 24 months old

- **Late Up to Date (adolescent):** Does not apply to the adolescent coverage report.
If the **Include patient listing tables** checkbox was selected on the input parameters screen an excel output will be provided in lieu of a chart/graph output.

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>MIIS ID</th>
<th>Birth Date</th>
<th>Age</th>
<th>Missed Vaccine Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>11/17/2015</td>
<td>2 yr 10 mo</td>
<td>DTaP, HepB</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11/17/2015</td>
<td>2 yr 10 mo</td>
<td>MMR, PCV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11/17/2015</td>
<td>2 yr 10 mo</td>
<td>Varicella</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>06/18/2016</td>
<td>2 yr 3 mo</td>
<td>Hib, PCV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>06/18/2016</td>
<td>2 yr 3 mo</td>
<td>PCV, DTaP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>02/08/2016</td>
<td>2 yr 8 mo</td>
<td></td>
</tr>
</tbody>
</table>

**Under-Immunized**: Patients who did not receive the recommended number of doses for at least one of the recommended vaccine groups.

**Missed Opportunities (childhood)**:
Patients not up-to-date for at least one of the recommended vaccine group, who received at least one other recommended vaccine between 16 and 24 months and who on that date were eligible but did not receive one of the nine recommended vaccines at that time.

**Missed Opportunities (adolescent)**:
Patients not up-to-date for at least one of the recommended vaccine groups as of the reference date, who received at least one vaccine between 11 and 19 years old, and who on that date were eligible, but did not receive one of the three recommended vaccines at that time.

**Up To Date (childhood)**:
Patients that were assessed in the Coverage Report and were considered to be up to date for the Childhood Vaccine Series by 24 months of age.

**Up To Date (adolescent)**:
The number of patients that were included in the assessment cohort AND are associated to the provider AND meet the measurements for all vaccines that are assessed in the Standard Adolescent Coverage Report EXCEPT for HepA and Flu.

**Late Up to Date (childhood)**:
Patients that were assessed in the Coverage Report and were complete after the patient was 24 months old.

**Late Up to Date (adolescent)**:
Does not apply to the adolescent coverage report.
Step 1 Custom Coverage Report

⇒ The Custom Coverage Report gives providers the flexibility to generate a report for a specified group of patients and immunizations.

⇒ Patients are determined by selecting an age range – where the As of Date is used to determine the birth date range of the patients to include in the report.

⇒ Immunizations given to patients are counted based on a specified Assessment Age or Date, as well as the number of doses for the chosen vaccines for your report.

⇒ Enter the total number of doses corresponding to a Vaccine Group to evaluate the selected patients’ immunizations.
  ⇒ Click the Default 4:3:1:3:3:1:4 values button to populate the childhood series in the vaccine group fields

⇒ Select Include Invalid Immunizations if you want to include invalid immunizations in your counts.

⇒ Optionally, you can click the blue bar to Limit Report By Patient Information with specific criteria selected from the following categories:
  ⇒ VFC Eligibility Status
  ⇒ Patient Race
  ⇒ Patient Ethnicity
  ⇒ Patient Status (defaults to “Active”)
  ⇒ City, State or Zip Code of residence

⇒ Select One Dose Away checkbox if you wish to see patients missing only one shot in one and only one of the specified groups as of the assessment date or assessment age.

⇒ Click Submit to run the Coverage Report.
The report includes a tabular representation of the number of patients assessed by your selected criteria.

Additional Coverage Criteria—This is only displayed if you checked the boxes on the input parameter screen.

If your coverage rates seem lower than expected, there may be an issue with the immunization data being sent from your EHR to the MIIS. Conducting quarterly data quality checks will help to ensure accurate and useful data. For additional information on data quality please see MDPH Top Strategies for Increasing Immunization Coverage Rates which can be found in the Help section of the MIIS.
Step 1 COVID-19 Coverage Report

⇒ The COVID-19 Coverage Report gives providers a convenient way to generate a report exclusively for COVID-19 coverage of patients.
⇒ Patients are determined by selecting an age range.
⇒ Immunizations given to patients are counted based on a specified administered date.
⇒ Select Include patient listing tables for an excel output of a line listing of your patients and if they meet the criteria, are incomplete, have no doses or have unspecified doses on their MIIS record.
⇒ Select Include Invalid Immunizations if you want to include invalid immunizations in your counts.
⇒ Optionally, you can click the blue bar to Limit Report By Patient Information with specific criteria selected from the following categories:
  ⇒ VFC Eligibility Status
  ⇒ Patient Race
  ⇒ Patient Ethnicity
  ⇒ Patient Status (defaults to “Active”)
  ⇒ City, State or Zip Code of residence
⇒ Click Submit to run the Coverage Report.
The PDF report includes aggregated data to represent the number of patients assessed by your selected criteria.

**Status** is defined as the following:

- **Meets criteria**: Out of the Assessment Cohort the number of patients that have received two doses of any two dose vaccines OR received one dose of any one dose vaccines in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

- **Incomplete**: Out of the Assessment Cohort the number of patients that have received one dose of any two dose vaccines in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

- **No Dose**: Out of the Assessment Cohort the number of patients that have not received any vaccine in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.
If the Include patient listing tables checkbox was selected on the input parameters screen an excel output will be provided in lieu of a pdf output.

### Meets Criteria
Out of the Assessment Cohort, the patients that have received two doses of any two dose vaccines OR received one dose of any one dose vaccines in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

### Incomplete:
Out of the Assessment Cohort, the patients that have received one dose of any two dose vaccines in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

### No Dose:
Out of the Assessment Cohort, the patients that have not received any vaccine in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

### Unspecified:
Out of the Assessment Cohort, the patients that have received 1 dose of Unspecified COVID-19 vaccine on or before the Assessment Date.
Step 3 COVID-19 Coverage Report

- Users can upload a list of patients and get an output of COVID-19 vaccines received by specified patients.

- For schools, the COVID-19 Coverage Report will default to this option when you select it from the drop down menu.

- For other providers, select the radio button next to **Upload a list of patients** to use this functionality.

- Open the template provided for your upload by clicking **Patient Upload Template**.

- For additional instructions, click **Instructions for Patient Upload**.

- Leave the column headings exactly as they are in the file, and enter up to 1000 of your patients’ information.

- Row 2 in the template has a note reminding you to use the format shown in each column header.

- The following fields are required:

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Date of Birth</th>
<th>Gender (F,M,U,T)</th>
<th>Phone Number (xxx) xxx-xxxx</th>
<th>Street Address</th>
<th>City or Town</th>
<th>State (XX)</th>
<th>Zip Code (XXXXX)</th>
</tr>
</thead>
</table>

- Middle Name, Address Line 2, MIIS ID, and MRN fields are optional.
Please note, all that leading 0’s of the birthdate and zip code will get stripped off when you enter them in the template but will be added back after the file is uploaded. For example, if you type 02115 in the zip code column, it will appear as 2115. When you upload the file the leading zero will be added back.

Save the template to your computer as a comma separated value (.csv) file, example: Patient List Upload.csv

Click Select File to select your .csv file from your computer. After you select and open the file from your computer, the file you selected will be listed to the right of the Select File button.

Click Upload to upload your .csv file to the application. After it has finished uploading, your file will be listed to the right of the upload button.

Enter the date by which you are searching for your patients to have been vaccinated.

Finally, click Submit Report.

After clicking Submit Report, a warning message will appear letting you know the report will take several minutes to process. Once it is complete, you will receive an email to the address associated with your MIIS account. Select OK if you would like to proceed with processing the report, or Cancel to adjust your input parameters and resubmit the report.

Once it has completed processing, the report can be opened under Reports> Delivered Reports.
# Excel Report Output

## Meets Criteria
Out of the Assessment Cohort, the patients that have received two doses of any two dose vaccines OR received one dose of any one dose vaccines in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

## Incomplete:
Out of the Assessment Cohort, the patients that have received one dose of any two dose vaccines in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

## No Dose:
Out of the Assessment Cohort, the patients that have not received any vaccine in the COVID-19 vaccine group on or before the Assessment Date. This excludes patients who only received Unspecified COVID-19 vaccine.

## Unspecified:
Out of the Assessment Cohort, the patients that have received 1 dose of Unspecified COVID-19 vaccine on or before the Assessment Date.

## Patients Not Vaccinated
Out of the Assessment Cohort, the patients for whom no patient record was located in the MIIS. The *Reason* column will explain why the system was unable to find a matching record. “No Match Found” indicates there are no existing records matching the patient criteria uploaded in your report. “Possible Matches Found” mean there are possible duplicate records matching the patient criteria. The system may not have been able to find a match for a patient because the formatting of the patient criteria was incorrect. This will be indicated by a “Field Validation Error” and the field(s) for which the error is located listed in brackets.