Tracking Schedule

Introduction:

This manual is designed to guide the user in creating or modifying immunization schedules. A schedule is a collection of series, owned or maintained by a provider organization. A series is a collection of doses of a vaccine. A client is recommended to get each dose in a series at the ages and intervals assigned in the rules. Rules apply at the schedule, series, and dose level. Rules are table driven. Manage Schedules allows you to set up the rules that apply to a vaccination. Only users that have Administrator privileges may access manage schedules.

The major activities allowed by Manage Schedules include:
1. Create Schedule
2. View Schedule List
3. Delete Schedule
4. Modify Schedule
    a. View Complete Schedule
    b. Add Series
    c. Modify Series
    d. Delete Series

The ACIP schedule is the default schedule assigned to all clients. The ACIP schedule is owned and maintained by the IR System Administrator. All Administrators may view or print the ACIP schedule, but only the IR System Administrator can modify this schedule.

Manage Schedules

Select manage schedules link from the menu panel. The manage schedules page will display. From this screen you can create a new schedule from a template, view the details of an existing schedule, or select one of your owned schedules to delete or modify. Your organization's owned schedules are not viewable by users from other provider organizations.

Creating a schedule

To create a schedule, begin at the Manage Schedules page.

Schedules are complex sets of rules and parameters. By taking a systematic approach, the complexity can be minimized. Any time a series is changed or created, careful testing of the impact should be instituted. This testing should not be limited to the specific series created or modified, but rather to other series that may interact with the modified series.

Setting up the base schedule

1. Select Manage Schedules from the menu.
2. You will go to the Manage Schedules screen.
3. Enter a schedule name (required). The name should be unique to your provider organization.
4. You may use another schedule as the base template by copying it into the new schedule. This saves you lots of effort. We will assume that this is your plan. Select a schedule to copy from the pick list.
5. You may add a description of the schedule.
6. If you plan to allow a grace period for validating immunizations, enter this number. This grace period is the number of days an immunization may be early, or in some cases late, and yet be considered valid. It is not used in recommending the next vaccination.

The grace period number of days is set schedule wide, but use of grace periods are controlled individually for each series in a schedule. At the series level, you may turn on or off a minimum grace period and/or a maximum grace period, which apply to earliest dates and latest dates respectively. GRITS does not apply a maximum grace period to the CDC/ACIP schedule.

7. You may enter the schedule standard minimum interval after a *not valid dose*. This will apply to any series, except those that are set to ignore this.

GRITS v6.0.0 disabled the 'minimum interval after not valid dose' rule. All series in the schedule will utilize the series adjacent intervals from the last dose given.

8. If you don't want others to be able to alter this schedule, select the Lock to Others check box. This may only be unlocked by the owner and the IR System Administrator.
9. Click Create Schedule button and go to the Modify Schedule page. Refer to the Modify Schedules section for adding, modifying, or deleting series and intergroup conflicts within the schedule.

If you are creating a schedule from scratch you are not finished. Every schedule must have at least one series.

View Schedule List

Clicking on the manage schedules menu item, brings you to the list of schedules available to you, based on your organization. The name of the schedule is a hyperlink that will take you to the View Complete Schedule page for schedules you do not own (i.e. CDC/ACIP schedule) or Modify Schedule page for schedules that you own.

Note that if you own a schedule, you will see a screen that allows you to modify a schedule. If you don't, you will only see the View Complete screen. You may see the View Complete screen from the View Schedule screen by clicking the View Complete Button.

Deleting a Schedule

To delete a schedule that you own, click the delete button to the right of the schedule name in the schedule list on the Manage Schedules page. The delete buttons will only appear next to schedules you own. This will permanently remove the schedule and all of its components.

Modify Schedule

The Modify Schedule page will allow you to update the schedule name, description, schedule grace period, and locked to others flag (preventing other users in your organization from updating the schedule). In addition, you can update a series, add/delete intergroup conflicts, or view and print the complete schedule.

Schedule Details | Schedule Name: CDC/ACIP | Save | Cancel | View Complete

View Complete Schedule

You may view and print the schedule from the View Complete Schedule screen.

If you do not want the menu items along the side of the screen to print, click the Printable Version button. Click the Print button on your browser.

Saving a Schedule

To save updates to the schedule, select the Save button. To return to the Manage Schedules page, select the Cancel button.

Remember that you must save changes before leaving Manage Schedules or changes will be lost. Saving occurs in 2 phases. The process to save a schedule is:
- *Create or update a series within the schedule.*
- *Select Manage Another Series button on the Modify Series page (changes to the series are saved in memory).*
- *When all changes are complete, select Save button on the Modify Schedule page (schedule and series changes saved to database).*
(To verify changes have been saved, make sure the schedule's last updated date on the view schedule list screen is updated.)

Saving prior to completion of all schedule and series updates is possible but can cause users of that schedule to experience unexpected behavior. Therefore, be sure that you complete all updates before saving the schedule, or update your schedule during off hours. The new schedule is built when the last updated date/time for the schedule in the database is greater than the last updated date/time for the schedule in memory.

SERIES RULES

The modify schedules page will default to the series tab, which lists all of the series in the schedule.

Add Series

Click Add Series button to add a new series to the schedule. See Modify series below for detailed instructions on fields available.

Delete Series

Select the series check box to the right of the series name and click delete button. You may select more than one series to delete.

Modify Series

In order to modify a series, select that series name hyperlink from the list on the Series tab. Follow the principals described in the section Creating a Series.

There are 3 primary tabs for the series view. Complete Series shows a summary of all settings for the series. The Series tab displays a page with sub-tabs that allow you to view and alter series wide parameters. The Doses tab displays another page with sub-tabs that allow you add, modify, or delete doses.

Creating a series:

A Series must have at least 1 dose and that dose must have either an age or interval rule. The series is not released for use until you save your changes.

1. Click Add to begin a new series. You will see the Complete Series tab. Since the series has no data, you only see the headers.

2. Click the Series tab.

Schedule Information...

Schedule Name: Eric's Test Schedule
Description:
Grace Period in Days: 4
Min. Interval After Not Valid 0D
Current Series: Manage Another Series

Complete Series   **Series**   **Doses**

Series Name [   ]

Minimum Grace Applies ☐   Ignore Not Valid Interval ☐
Maximum Grace Applies ☐

Acceptable Vaccines | **Maximum Doses** | **Trade Name** | **Alternate Series** | **Invoke On Rules** | **Result Rules** | **Result Interval** | **Override Rules** | **Unacceptable Vaccine Groups** | **Gender Rules**

3. Name the series.
4. Indicate if the schedule minimum grace period[1] applies to this series.
5. Indicate if the schedule maximum grace period applies to this series.

> *This is not as simple as it appears. Do NOT allow maximum grace period to apply if a pediatric series has a maximum age and is followed by an adult series with a minimum age An issue exists with regard to the adult series with a minimum age, which validates an early shot although the shot is still within the recommended age range of the pediatric series.*
> *ACIP does not indicate a maximum grace period; therefore, the CDC/ACIP schedule in GRITS does not add apply the maximum grace period to any series.*

6. Indicate if schedule interval after not valid rule applies. (Default: Ignore not valid interval = Y)

> *Note: The minimum not valid interval settings are ignored in the Georgia Registry of Immunization Transactions and Services. Regardless of the 'Ignore not valid interval setting,' the intervals between doses are established using the series adjacent and non-adjacent intervals from the previous immunization given.*

SERIES TABS

Acceptable Vaccines
This tab allows you to indicate all of the potential vaccines that can satisfy this series. In addition, for each vaccine in the series, you may indicate valid dose sizes and age ranges. (e.g. If an adult received a single 0.5 mL pediatric dose of Hepatitis B, the immunization is not valid; however, if an adult received two 0.5 mL pediatric doses, the immunization is valid.) Lastly, you may indicate valid age ranges for trade names in the series (e.g. FluMist is valid for ages 2-50 years.)

[1] When a schedule has a grace period and the series allows the grace period to be used for earliest acceptable date, then the Immunization Evaluator will consider a dose valid, even if it was given up to the grace period early.

| Acceptable Vaccines | Maximum Doses | Trade Name | Alternate Series | Invoke On Rules | Result Rules | Result Interval | Override Rules | Unacceptable Vaccine Groups | Gender Rules |

Available Vaccines

Adeno T4
Adeno T7
Adeno-Unspecified

[Add >>]
[<< Remove]

Acceptable Vaccine(s)

Primary Vaccine

Associated Trade names with Acceptable Vaccines...

Vaccine	Trade Name	Min Age*		Max Age*		Add
⌄	⌄		D ⌄		D ⌄	Add

Only used if different from the generic series ages...

Dose Size Rules...

Vaccine	Size	Mult	Minimum Age		Maximum Age		Add
⌄		Full ⌄		D ⌄		D ⌄	Add

[2] Note that TriHIBit (DTAP/Hib) is only acceptable for a Hib series if it is the final dose in a multi-dose series. We set DTAP/HIB as an acceptable vaccine for the series, but set it as unacceptable for all doses except the last dose in the series.

[3] Dose size is the volume (e.g. 0.5 mL). Multiplier is number of doses of the given size delivered. So a double dose of pediatric Hepatitis B would have a multiplier of 2.

Indicate the acceptable vaccines for this series.
1. Select the vaccines that are acceptable for ANY dose in this series. (You will be able to indicate any that are not acceptable for specific doses later.[2])
   1.1. You must select at least 1 acceptable vaccine.
   1.2. Indicate the primary vaccine for this series. (This sets the vaccine groups that are associated with this vaccine. In the case of a combo vaccine, both vaccines will be set.) Only one primary vaccine is allowed.
2. Dose Size Rules. If there is a minimum dose size[3] and dose multiplier for this vaccine to be used in this series, enter this information for each vaccine. (This will be ignored if the immunization is not from registry inventory.) The Immunization Evaluator will multiply the dose size (ml) and dose multiplier to arrive at the total volume required to be acceptable. (Dose multiplier = 1 'full', dose size = 0.5 ml will give a total dose size of 0.5 ml)
   2.1. Select the vaccine for which to apply the dose size rule
   2.2. Enter the size of a standard dose (ml)
   2.3. Enter the multiplier (half, full, 2, 3, 4 or 5) that would make the standard dose valid for the age range.
   2.4. Enter the Minimum age and age attribute (e.g. 6 M) for which the dose size is valid. If this is null or 0, then there is no minimum age.
   2.5. Enter the Maximum age and age attribute (e.g. 3 Y) for which the dose size is valid. If this is null or 0, then there is no maximum age.
   2.6. Select the Add button to add the dose size rule. The rule should be reviewable in the Acceptable Vaccine Summary section at the bottom of the page.
   2.7. Repeat as needed.

3. Trade name Age Range Rules. If this series has different age rules depending on trade name and client age, then add trade name age rules. There must be either a minimum or maximum age and trade name. Both age parameters can be entered.
   3.1. Select the vaccine from the vaccine pick list. The selected vaccine will populate the Trade Name pick list.
   3.2. Select a Trade Name from the trade name pick list.
   3.3. Indicate the minimum age and age attribute (e.g. 2 Y). If this is null or 0 then there is no minimum age.
   3.4. Indicate the maximum age and age attribute (e.g. 50 Y). If this is null or 0, then there is no maximum age.
   3.5. Select the Add button to add the rule to the series. The rule should be reviewable in the Acceptable Vaccine Summary section at the bottom of the page.
   3.6. Repeat as needed.

> *Note: The Trade name age range rule is different from the Trade name rule. The Trade name rule requires a dose to be from the specified trade name or it will be not valid, regardless of other rules. Trade name age range rule says that if this dose is from the indicated trade name, it must be administered between the age range specified or it will be not valid.*
>
> *This is also different from the Age rules that apply to individual doses.*

4. To delete a trade name age range or dose size rule, select the checkbox in the Select column in the Acceptable Vaccines Summary section and click the Delete button.

Acceptable Vaccines...								
Vaccine	Rule	Trade Name	Size	Mult	Min Age	Max Age	Primary
FLU-Unspecified							Yes
FLU, SPLIT							
FLU, SPLIT	Age	AFLURIA			18Y	0D	
FLU, SPLIT	Age	AFLURIA-PF			18Y	0D	
FLU, SPLIT	Age	FluLaval > 17 Years			18Y	0D	
FLU, SPLIT	Age	Fluarix-PF > 17 Years			18Y	0D	
FLU, SPLIT	Size		0.5	0.5	0 D	3 Y	
FLU, SPLIT	Size		0.5	1.0	3 Y	0 D	
FLU, SPLIT	Size		0.25	1.0	0 D	3 Y	
FLU, SPLIT	Size		0.25	2.0	3 Y	0 D	
FLU-LAIV							
FLU-LAIV	Age	FluMist			2Y	50Y	
FLU, WHOLE							

Maximum Doses

If there are a maximum allowable number of doses for a vaccine group, regardless of immunity or validity of doses, then the maximum doses rule applies.

1. Enter information for this rule. (e.g. A client who receives 6 or more doses of DTaP before the age of 7 years is not recommended to receive an additional dose of DTaP. In this case, we would enter 6 as the max doses and 7 Y (years) as the max age.)

Trade name

If this series can only be satisfied by a trade named vaccine, enter information for this rule.

1. Select any trade names from the list on the left into the list on the right. More than one trade name may satisfy this series.

Only enter a trade name rule if this series can ONLY be satisfied by the trade name(s) selected and not just the vaccine.

Alternate Series

If there are other series that can replace doses in this series, add the information.

1. Select the alternate series.
2. Enter the age and age attribute for the starting dose in the alternate series.
3. Enter the relationship symbol (>, >=, =, <=, <) for the age relationship. This will control how the age at immunization for the first dose is related to the age entered above. For example if the age is 12 months and the relationship symbol is <, then we would say, if the age at immunization is before 12 months for the first dose, then use this rule.
4. Enter the number of doses recorded in the alternate series.
5. Enter the number of doses that will be replaced by the alternate series for the combination of age and doses listed in the rule.
6. Enter the vaccine group of the alternative series being evaluated. This is used if the vaccine given is a combo vaccine. We are only interested in one component of that combo.
7. Click the Add button to add the alternate series rule. The rule should appear in the alternate series summary.
8. Repeat as needed.

NOTE: The ages and relationships MUST be mutually exclusive. In addition, the alternate series is presumed to be prior to the series using it as an alternative. In situations where the alternate is recorded as after the series, the Immunization Evaluator will not apply the alternative rule.

Invoke Rules

The invoke rules invoke the vaccine group(s) of the primary vaccine for this series. This forces the vaccine group(s) to be included for consideration. If no Invoke rules are set, then the vaccine group is always considered by the Immunization Evaluator. For example, if a series for Merck Comvax (HepB-Hib) is set to invoke on use, then the vaccine groups HepB and Hib will be

included in the recommendations. Invoke rules do not invoke the specific series. Multiple series may be considered for a single vaccine group; the Immunization Evaluator processes each series and chooses the series to be invoked and used for evaluation and recommendation of the vaccine group.

Invoke on Use:

If you only want to see the vaccine group evaluated if a client has received at least one dose of this vaccine, select Invoke on Use.

Invoke on Valid Only:

Tied to *Invoke on Use*, if you only want to see the vaccine group evaluated if a client has received at least one VALID dose of the vaccine, select Invoke on Valid Only.

Invoke on High Risk:

GRITS does not currently use high risk functionality.

If you only want to see the vaccine group evaluated if a client is designated as high risk, then select Invoke on High Risk.

Note: A High Risk indicator exists to designate an entire provider organization as high risk. Users of the high risk organization will view all clients as high risk. For GRITS specifically, a client may also be designated as High Risk by a client High Risk indicator.

Invoke on Age:

If you only want to see the vaccine group evaluated once a client has reached a certain minimum age, select Invoke on Age.

Minimum Age:

Tied to *Invoke on Age*, if Invoke on Age is selected, add the minimum age and age attribute.   The vaccine group will be evaluated if the client has reached the minimum age.

Invoke on Comment:

If you only want to see the vaccine group evaluated if a client has a specific comment recorded, select Invoke on Comment.

Comment:

Tied to *Invoke on Comment*, if Invoke on Comment is selected, you must also select a comment that triggers the series to be considered for the purpose of evaluation.

> *Note: For the ACIP schedule, the client comment "Client has been exposed to rabies" triggers two series to be considered for evaluation of immunization against Rabies. The two series are similarly labeled "Rabies post-exposure…"*

History Required:

Also tied to *Invoke on Comment*, if Invoke on Comment is selected, you may also select History Required if the series is only considered for evaluation of the vaccine group if history of immunization against the antigen exists previous to the selected comment.

> *Note: For the ACIP schedule, two series "Rabies Post-Exposure with History" and "Rabies Post-Exposure without History" are considered for evaluation by the client comment "Client has been exposed to rabies." The History Required flag enables the Immunization Evaluator to choose between the two series. History Required is selected on the "Rabies Post-Exposure with History" series, so it is only invoked if the client has history of Rabies immunization. History Required is not selected on the "Rabies Post-Exposure without History" series, so it is only invoked if the client does not have history of Rabies immunization.*

Result Rules

Result Rules functionality is disabled in GRITS.

The result rules and result interval are used when setting up smallpox vaccination in the Immunization Evaluator. You may enter any number of result rules, but they each should be unique. You may add or delete rules.

| Acceptable Vaccines | Maximum Doses | Trade Name | Alternate Series | Invoke On Rules | Result Rules | Result Interval | Override Rules | Unacceptable Vaccine Groups |

Add

Result	Historical	Series Is Satisfied
Equivocal	☐	☐

Result Rules Summary...

Remove selected results from this series... [Delete]

Select	Result	Historical	Series Is Satisfied
☐	No Take		
☐	Equivocal		
☐	Major	Yes	Yes
☐	No Take	Yes	Yes
☐	Equivocal	Yes	Yes
☐	Major		Yes

1. Select a result for the rule.
2. Indicate if a history of immunization is required by the rule.[4]
3. Indicate if the series is satisfied (client is presumed to be immune).
4. Select the Add button to add the rule. The rule should now appear in the Result Rules Summary… section.

To delete a rule, select it with the checkbox and click the Delete button.

When you are done, click to another tab or manage another rule.

> *Result Interval is required, if there are result rules.*

[4] History is any smallpox vaccination, regardless of read.

Result Interval
Result Rules functionality is disabled in GRITS.

| Acceptable Vaccines | Maximum Doses | Trade Name | Alternate Series | Invoke On Rules | Result Rules | Result Interval | Override Rules | Unacceptable Vaccine Groups |

Delete

Minimum Interval	Recommended Interval	Overdue Interval	Maximum Interval
6 D	7 D	8 D	28 D

1. Indicate the minimum and maximum read intervals.
2. Indicate the recommended and overdue intervals.

Override Rules

In some situations, a clinician may assume that the client has received the primary series needed to begin a booster series. The Override Rule allows users to disregard the primary series for a vaccine group. The Override Rule is set up for a series by entering a minimum age and age attribute for which the override is allowed to occur. Click to another tab or manage another series to store the information. This will allow users to override the primary series for a client who has reached the minimum override age.
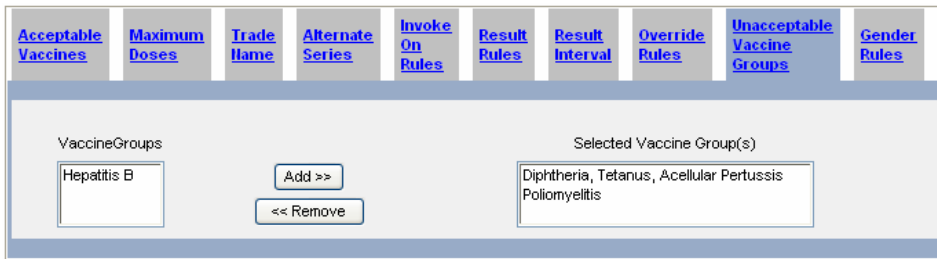

An override rule defined in a tracking schedule is not automatically applied to an individual client's immunization record. To apply an override rule to a client's immunization, follow the steps found in the *Applying an Override Rule to a Client's Immunization* section of the Managing Immunizations chapter of this manual.

Note: *We assume that the first dose administered is set to disregard primary series. If the dose other than the first is set to disregard primary series, the Immunization Evaluator will not function properly.*

Unacceptable vaccine group

If a series for a combination vaccine applies to only one member vaccine group, set the other vaccine group(s) to unacceptable. The example is Pediarix. There will be a Pediarix-Hepatitis B series but no series for the Polio or DTaP components.

1. Add each unacceptable vaccine group to the list on the right.
2. Tab to another page or manage another Series.

Gender Rules

The gender rule determines if a series is included in the schedule for a client. The gender rule first determines if the client is of a specified gender. If the client is of the specified gender, then the vaccine group will be included in

the evaluation and recommendations. If the client is not of the specified gender, the outcome depends on whether the gender rule allows the series to be invoked on use for genders not selected. If 'Invoke on use for clients with gender selected above' is true and the client has at least one dose, then the vaccine group will be included; otherwise, the vaccine group will be unevaluated and no recommendations will be made.

1. Select the checkbox for the gender that the rule applies to.
2. If the series will be invoked on use for client that the rule does not apply to, select the checkbox for 'Invoke on use for client with gender not selected above'.

> Remember that you must save changes before leaving Manage Schedules or changes will be lost. Saving occurs in 2 phases. The process to save a schedule is:
> * Create or update a series within the schedule.
> * Select Manage Another Series button on the Modify Series page (changes to the series are saved in memory).
> * When all changes are complete, select Save button on the Modify Schedule page (schedule and series changes saved to database).
> (To verify changes have been saved, make sure the schedule's last updated date on the view schedule list screen is updated.)

DOSE RULES

Creating a Dose in a Series:

Now you need to create a record and rules for each dose and booster in the series. Create a new dose and add all applicable rules for the selected dose. Repeat for each dose in the series. Every dose requires an age or an interval rule; however, many rules are often not needed. If no value needs to be added, leave the field set to 0 (zero). For instance, there is no minimum age for HepB dose #1, so leave it set at 0 days. (The current dose displayed for potential modification is indicated by yellow highlighting in the Dose Details section.)

> Note: The minimum interval after an invalid first dose is determined by the minimum interval set on the first dose. GRITS does not use the schedule-wide minimum not valid interval setting.

Add Dose

To add a new dose to the series, select the New Dose button – a new dose will appear in the Dose Details section. Set up all applicable dose rules following the steps outlined in the Modify Dose section.

Delete Dose

To delete a dose from the series, select the checkbox for the dose in the Select column of the Dose Details section. Click the Delete button in the Dose Details section.

Modify Dose

Select the dose you wish to modify by clicking on the dose number hyperlink. In the Dose tab, the information is displayed for the dose that is highlighted in yellow in the Dose Details section.

Booster

Indicate if this dose is a booster. Boosters are administered repeatedly based on the interval rules. In other words, boosters allow unlimited doses. For instance, the Td booster is recommended every 10 years.

Remember that boosters are only allowed for the last dose in a series.

DOSES TABS

Age Rule

If age rules apply to this (highlighted) dose, then enter the ages and attributes required.

Age Rule	Adjacent Interval	Non-Adjacent Intervals	Unacceptable Vaccines	Jump Forward	Min Interval and Age to Validate

			Delete
Minimum Age	**Recommended Age**	**Overdue Age**	**Maximum Age**
[____] D ▾	[____] D ▾	[____] D ▾	[____] D ▾

1. Enter an age and age attribute for each age that applies (e.g. minimum age 42 D). Remember the following rules: minimum age <= recommended age, recommended age <= overdue age, overdue age <= maximum age. If no value needs to be added, leave the field set to 0 (zero).
2. You may add another dose at this time or you may finish entering information on other tabs for this dose.

Note: The maximum age is the age at which the client should not receive this vaccination. For example, if DTaP is set to 7 Y, the immunization will become not valid if received on or after the 7th birthday. GRITS does not apply a maximum grace period to the maximum age on the CDC/ACIP schedule.

3. To delete an age rule for the highlighted dose, select the delete button that is displayed above the maximum age column.

Adjacent Interval

If there are rules that are used for this dose that relate to the immediately previous dose, then enter intervals and interval attributes that apply.

Age Rule	Adjacent Interval	Non-Adjacent Intervals	Unacceptable Vaccines	Jump Forward	Min Interval and Age to Validate

		Delete
Minimum Interval	**Recommended Interval**	**Overdue Interval**
28 D ▾	2 M ▾	3 M ▾

1. Enter an interval and interval attribute for each interval that applies (e.g. 28 D), Remember the following rules: minimum interval <= recommended interval, recommended interval <= overdue interval. If no value needs to be added, leave the field set to 0 (zero).
2. You may add another dose at this time or you may finish entering information on other tabs for this dose.

Note: When an alternate series has replaced some doses for the series under consideration, the interval between the dose being evaluated and the dose in the alternate series that preceded it is evaluated. For example if the primary doses in the Td series are replaced by DTaP, then the minimum interval to the Td booster is based on the interval since the final dose in the DTaP series.

3. To delete a min adjacent interval rule for a dose, select the delete button above the overdue interval.

Non-Adjacent Intervals

If there are intervals between this (highlighted) dose and a non-adjacent previous dose in the series that apply, then enter the interval and attribute.

1. Enter the dose number of interest. (e.g. 1 for dose 1)
2. If applicable, enter the minimum interval and interval attribute (e.g. 112 D).
3. Click the Add button to add the rule to the highlighted dose. The rule will now appear in the non-adjacent interval summary.
4. To remove a non-adjacent interval rule from the highlighted dose, select the rule checkbox and click the Delete button in the non-adjacent interval summary.

Unacceptable Vaccines

If there are vaccines that are unacceptable for this dose in a series, but acceptable for another dose in a series, then enter this information.

1. Select the vaccine that is unacceptable for this dose. (It should already be in the Series Acceptable vaccines.)

> *Note: For the CDC/ACIP schedule, TriHIBit may only be used as the final dose in a multiple dose series.*
>
> *The unacceptable vaccine rule is used in conjunction with the acceptable vaccine rule to handle this requirement. DTaP-Hib is set as an acceptable vaccine for all*

multi-dose Hib series (recall that the acceptable vaccine rule is applied to the whole series – all doses). To limit DTaP-Hib to the final dose of each multi-dose series, the vaccine is set as an unacceptable vaccine for each dose in the series except the final dose.

A single dose series is also set up for HIB for 15 months through 4 years. DTaP-Hib (TriHIBit) is not an acceptable vaccine for the series, as the series does not contain multiple doses.

Jump Forward

In cases where a client is behind schedule, the series accelerates and doses may be skipped. For instance, if client receives DTAP #4 after age 4 years, this is treated as dose #5 and the series is complete. In these cases, enter the minimum age and attribute for this acceleration to occur. Also indicate the number of doses to skip. In the example above, you would enter 4 years as the minimum age and 1 as the number of doses to skip on dose 4. You may have more than 1 jump forward rule per dose. This information is stored with the dose where the jump will begin. In the example above, this is dose 4. The rules that are specific to the dose jumped to will apply (e.g. interval, age, etc.)

Example, for a dose 2 you might record a jump of 1 dose with a minimum age of 12 months. You might also record another jump of 2 doses with a minimum age of 15 months. In this case, if the client were 12+ months old the 1 dose jump would occur; at 15 months and older the 2 dose jump would occur.

1. Enter the number of doses to jump (e.g. jump 2 doses).
2. Enter the age and age attribute to apply to the jump (e.g. 15 M).
3. Click the Add button to add the rule to the highlighted dose. The rule will now appear in the jump forward rules summary section.

Note: A client may only jump once in the series for each immunization. For example, for a client receiving a 2nd shot of HIB at 12 months old, the HIB series will jump 1 dose, resulting in the 2nd dose of the series being skipped. The HIB series

also has a 1 dose jump rule on the 3rd dose for a client that is 12 months old. If the client has already jumped from the 2nd dose to the 3rd dose, it will not jump again from the 3rd to the 4th dose.

4. To remove a jump rule, select the jump rule checkbox and click the Delete button in the jump forward rules summary section.

Notes on Setting up the Jump Rule for HIB:

The HIB schedule is complex. The number of doses required decreases as the client's age at the time of the first immunization increases; the number of doses also decreases when there is a lapse in the client's immunizations. As the client gets older, the required number of doses decreases. TriHIBit is only approved as the final dose in a multi-dose series. PedvaxHib and Comvax may be used in 3 dose series or as part of any of the other series for HIB.

The recommended 4-dose series assumes that the series starts from age 2 - 6 months, followed by a 2nd and 3rd dose every 2 months and a final 4th dose given at age 1 – 4 years. The addition of jump rules allow a client to complete the series with only 2 or 3 doses in the event there is a lapse in the client's immunizations.

A 3-dose series exists for children who receive their 1st dose from 7 – 11 months. The addition of jump rules allow a client to complete the series with only 2 doses in the event the client's first dose is from 12-14 months, or if there is a lapse after the client's first dose.

A 1-dose series exists for children who receive their 1st dose at age 15 months and older. TriHIBit is not allowed to be used in this series because the series does not contain multiple doses. All multiple dose series only allow TriHIBit as the final dose. The Immunization Evaluator allows only one jump per immunization; therefore, the following jump rules apply:

Hib (4 dose)			
Dose	Age	Jump Rules	Note
1	2 – 6 m	none	
2	12 – 14 m	1	Jump to dose #3 and use dose #3 rules
2	15 m +	2	Jump to dose #4 and use dose #4 (final dose) rules
3	12 m +	1	Jump to dose #4 and use dose #4 (final dose) rules
4		none	

Hib (3 dose)			
Dose	Age	Jump Rules	Note
1	7-11 m	none	
1	12 – 14 m	1	Jump to dose #2 and use dose #2 rules
2	15 m +	1	Jump to dose #3 and use dose #3 (final dose) rules
3		none	

HIB (1 dose)			
Dose	Age	Jump Rules	Note

1	15 m +	none	

Hib Merck (3 dose)			
Dose	Age	Jump Rules	Note
1	2 m	none	
2	4 m	none	
3	1 y	none	
Note that we require the doses to be Comvax or PedvaxHIB, and the last dose can also be TriHIBit. There is no jump for 7-11 month olds.			

Min Interval and Age To Validate

Minimum Interval to Validate:

There are doses in a series that are valid in spite of being received prior to the minimum adjacent interval. The minimum adjacent interval is still applied to recommendations. In these cases, enter the minimum interval to validate and attribute that will apply to this dose.

For example, the ACIP schedule recommends a minimum interval of 6 months between dose #3 and dose #4 for DTaP; however an exception to this rule also exists stating that dose #4 is acceptable as early as 4 months after dose #3. For this reason, the minimum adjacent interval is set to 6 months and the minimum interval to validate is set to 4 months.

Minimum Age to Validate:

This rule allows you to specify a minimum age to validate that is different than the minimum age displayed for a dose. Enter the minimum age to validate and attribute on the dose. The minimum grace period does not apply to the minimum age to validate.

Reminder: The process to save a series is:
• *Create the series.*
• *When the series is complete, select Manage Another Series button on the Modify Series page (saves series changes to memory).*
• *When all series are complete, select Save button on the Modify Schedule page. (saves to database).*

Intergroup Conflict

You can add or delete any inter-vaccine group interval conflicts, such as the conflict between Varicella and MMR.

From the Modify Schedules page, click on the Intergroup Conflict tab.

Add Inter-group Conflict

You will need to create a record for both directions of a conflict. For example, create a conflict for Varicella to Measles and Measles to Varicella.

1. Select a vaccine group from the left pick list to create a record in the list below.
2. Select a vaccine group from the right pick list to add conflicting vaccine to the list below.
3. Enter a number for the beginning of the conflict period, for instance 1 day.
4. Enter a time unit (D, M, Y).
5. Enter a number for the ending of the conflict period, for instance 28 days.
6. Enter a time unit.
7. Repeat until done.
8. Select Save button on the Modify Schedule page. (saves to database).

A begin interval of 1 day and an end interval of 28 days means that vaccinations from the conflicting vaccine groups will not be valid if received between 1 and 27 days (inclusive) of each other.

Delete Inter-group Conflict

1. Select the conflict(s) you wish to delete by checking the box next to them.
2. Click the Delete button.