

**HARVARD
CATALYST**

THE HARVARD CLINICAL
AND TRANSLATIONAL
SCIENCE CENTER

Quick Start Guide: Visit Templates

In this guide, you will learn how to successfully build outpatient and inpatient visit templates in the HCCRC Scheduler application by walking through the following content:

- Visit Template Basics
- Create a Visit Template
- Relative Time vs. Clock Time
- Gantt Sections, Sorting, and Pagination
- Building the Template
 - Add, Edit, Copy, Delete Resources
 - Link, Unlink Resources
 - Copy Inpatient Template Days
 - Bulk Actions
- How the Search Algorithm Works
- Template Building Best Practices

Questions? Please reach out to the HCCRC Scheduler application support team
help desk - harvardcatalyst.zendesk.com
email - support@harvardcatalyst.zendesk.com

Updated 11/20/2019

Visit Template Basics

Visit Templates tell us the following information:

- What resources are required for a visit and their order (Resources)
- Where the visit is going to happen (Sub-location)
- What level of intensity the resources will be used (Intensity Levels)
- What resources are billable to the investigator (Billable Resources)

In the HCCRC Scheduler application, resources can be FIXED, FLOAT, or FLEX resources.



A FIXED resource must happen at the time indicated on the template and cannot float within a larger window or flip order with another resource.



A FLOAT resource has a desired duration that can float within a larger window. Resources with the same desired duration and float window can be LINKED to float together.



FLEX resources can flip order with another adjacent FLEX resource in their FLEX group (requires 1 or more resources—but no more than 3 in a LINKED group)

VISIT TYPE indicates what type of visit (outpatient or inpatient) and also the location information. Outpatient visits are visits that do not span over midnight – they start and end on the same day. Inpatient visits have resources that span and/or a patient that stays over midnight; inpatient visits could be multiple days.

A SUB-LOCATION indicates where a visit takes place and where the resources for that visit will be used.

Outpatient CRC	Inpatient CRC	Outpatient Non-CRC	Inpatient Non-CRC	Outpatient Off Institution	Inpatient Off Institution
Visits occur at CRC (or one of its sub-locations)	Visits occur at CRC (or one of its sub-locations)	Visits occur at CTC or another unit outside the CRC	Visits occur at CTC or another unit outside the CRC	Visits happen outside the hospital	Visits happen outside the hospital

Quick Tips

- At least one of the template resources MUST start at 00:00.
- If your template only involves a single resource, it must be a fixed resource.
- You may only delete a resource from a template if it has never been used to schedule visits.

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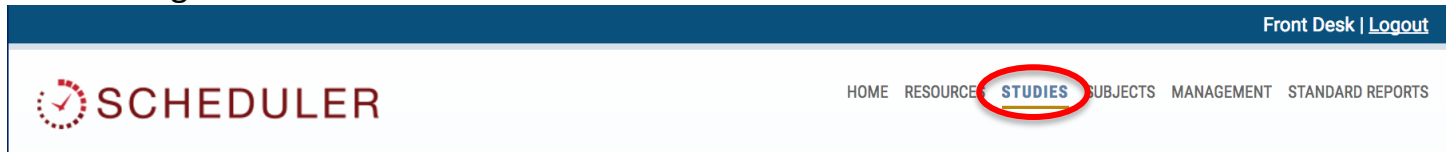
Updated 11/20/2019

Create a Visit Template

Before building resources into the template, you must first create or set up the template.

To create your visit template

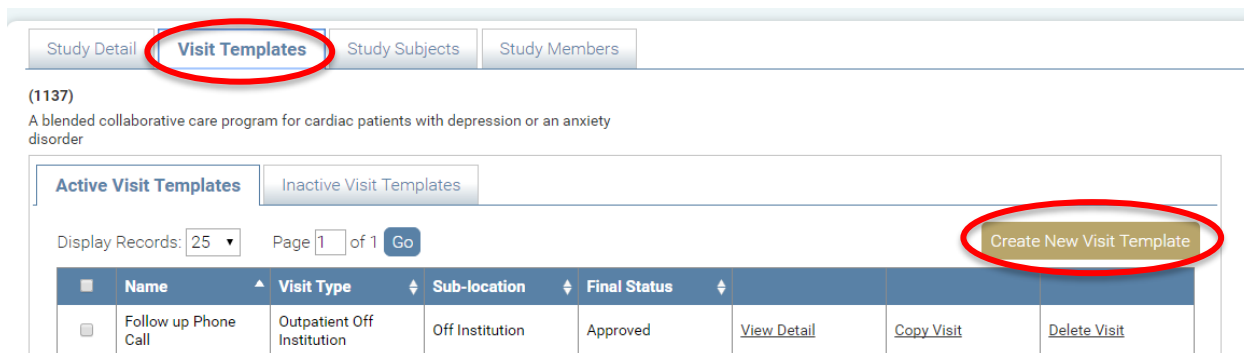
1. Navigate to the *Studies* module.



2. In the Studies Module, you will see the names of studies to which you are assigned. You can view the visit templates and other study information by clicking the *View Detail* link.

Name	PI Name	Catalyst ID	Local ID	Study Status	
A pilot study to test the effect of low and high tryptophan intake on metformin response in healthy volunteers.	staff180, study	1493	1119	CLOSED	View Detail
A blended collaborative care program for cardiac patients with depression or an anxiety disorder	staff116, study	1629	1137	OPEN	View Detail
A brain imaging study of opioid (morphine) and non-opioid (ketorolac) conditioning effects	staff122, study	553	0982	OPEN	View Detail

3. After clicking *View Detail*, you will be inside the individual study record. To view the list of associated Visit Templates and have the option to create a new template, click the *Visit Templates* tab.



(1137)
A blended collaborative care program for cardiac patients with depression or an anxiety disorder

Active Visit Templates | Inactive Visit Templates

Display Records: 25 | Page 1 of 1 | Go

Create New Visit Template

Name	Visit Type	Sub-location	Final Status			
Follow up Phone Call	Outpatient Off Institution	Off Institution	Approved	View Detail	Copy Visit	Delete Visit

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4. When you click the *Create New Visit Template* tab, the system displays a form to help you decide what kind of visit you want to create and where the visit will take place.
5. When you are done filling out the Create New Visit Template form, click the *Save* button. After saving, you can navigate back into the new template and begin building and adding resources.

* = Required Field

Create New Visit Template

Visit Name * Research Pharmacy (check if Yes)

Short Name Part of this Visit occurs at:

Sub-Location * Choose or Type Ahead Institution: Non CRC

Visit Type * Choose or Type Ahead Non Institution: Non CRC

Comment
255 characters remaining

Levels Of Service

Nursing Intensity Nutrition Intensity Processing Intensity Set-Up Intensity

Cancel Save

Relative Time vs. Clock Time

Outpatient templates are organized in relative time. **00:00 indicates the start of the visit.** In a sense, 00:00 conceptually could mean anytime when the visit actually gets scheduled (9:30am, 3:15pm, etc.).

Inpatient Templates can be organized in Clock Time (00:00= Midnight) or Relative Time (00:00=Start of the Visit). By default, Inpatient Templates are saved as Clock Time in their initial creation stage. After you create the basic visit template overview (Visit Name, Sublocation, Visit Type), you can click “Edit Visit Template and check the “Relative Time?” box in the lower left hand portion of the page, and then click “Save”.

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Visit Detail | Visit Template Approval | Build Visit Template

(1137)
A blended collaborative care program for cardiac patients with depression or an anxiety disorder
Test inpatient
Edit Visit Template

Additional Details

Overview

Visit Name	Test inpatient	Research Pharmacy (check if Yes)	<input type="checkbox"/>
Short Name		Part of this Visit occurs at:	
Sub-Location	WHT 12	Institution: Non CRC	<input type="checkbox"/>
Visit Type	Inpatient CRC	Non Institution: Non CRC	<input type="checkbox"/>

View Visit Template Comments

Relative Time?

Levels Of Service

Nursing Intensity	2	Nutrition Intensity	2	Processing Intensity	1	Set-Up Intensity	1
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Gantt Sections, Sorting, and Pagination

Sections

Visit template resources are distinguished in the Gantt chart with the following categorizations:

Sort Resources by : Start (Ascending) + Add New Resource

- **Multi-Day (Ungrouped)** ←

Resource	Type	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00
No Resources											

- **Single Day (Ungrouped)** ←

Resource	Type	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00
No Resources											

- **Flex Group** ←

Resource	Type	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00
No Resources											

- **Float Group** ←

Resource	Type	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00
No Resources											

Sort Resources by : Start (Ascending) + Add New Resource

Multi-Day (Ungrouped)

This only appears for inpatient visits.

- Overnight resources that are not linked to another resource (to form a group) are added to this section

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- Float resources with float windows (regardless of the desired resource times) that span overnight will also be added to this section
- A resource that ends at midnight on the next day is considered a multi-day resource. Please note that visually, the next day will show the resource name, but the actual block may not be visible, as it has no real duration on that next day.

Single Day (Ungrouped)

- Non-linked resources that start and end on a single day are added to this section

Flex Group

- Flex resources that are linked together are moved to this section, regardless of if they are multi- or single day resources
- This section could have multiple groups, although it is recommended to keep linked groups to a minimum (see [Best Practices](#))

Float Group

- Float resources that are linked together are moved to this section, regardless of if they are multi- or single day resources
- This section could have multiple groups, although it is recommended to keep linked groups to a minimum (see [Best Practices](#))

Sorting



- Sorting is applied within each section (instead of across sections)
- The default sort is *Start (Ascending)*
 - Primary sort: resource start time (earliest to latest)
 - Secondary sort: resource end time (latest to earliest)

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- This means that for resources with the same start time, the resources with the longer duration will be at the top
- *Resource (Ascending)* and *Resource (Descending)* will sort on the Resource column, which is the resource name
 - Primary sort: resource name (ascending or descending)
 - Secondary sort: resource start time (earliest to latest)
 - Tertiary sort: resource end time (latest to earliest)
- *Type (Ascending)* and *Type (Descending)* will sort on the Type column
 - Primary sort: resource type (ascending or descending)
 - Secondary sort: resource start time (earliest to latest)
 - Tertiary sort: resource end time (latest to earliest)

Pagination

For inpatient visits that have several days, the pagination feature allows you to easily scroll through or jump to the desired day of the visit.

1228 study staff163 Template Status Not Approved Clock Time

A Double-Blind, Placebo-Controlled Randomized Trial to Study the Viaskin Milk Efficacy and Safety for Treating IgE-Mediated Cow's Milk Allergy in Children (MILES Study)

test inpatient

Sub-Location: WHT 12 Total Resources In Visit: 1
Visit Type: Inpatient CRC Total Day Resources: 1

Sort Resources by: Start (Ascending)

Fixed Float Flex

First Previous Day 2 of 4 Go Next Last

Type in a desired day and click <Go> to jump that page/day.

Add New Resource Bulk Actions

Multi-Day (Ungrouped)

Resource	Type	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00
1218 Bed A - WHT 12	Room										

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Add a Resource

After clicking the *Add New Resource* button, a form will appear. When you are finished filling out the form, click the *Save* button.

test inpatient

Sub-Location: WHT 12 Total Resources In Visit: 1
Visit Type: Inpatient CRC Total Day Resources: 1

Sort Resources by: Start (Ascending) << Day 2 of 4 Go >>

+ Add New Resource Bulk Actions

Multi-Day (Ungrouped)

Resource	Type	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00
----------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Add New Resource

Resource*

Billable for the visit?

Resource Category Fixed Float Flex

Resource Start Day*

Resource End Day*

Float Start Day

Float End Day

Standard Alternate?

Resource Start Time*

Resource End Time*

Float Start Time

Float End Time

Available Activities

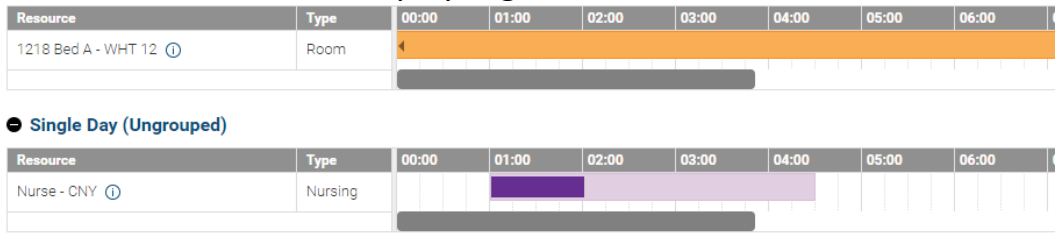
- Display Unselected Annotations
- Display Selected Annotations
- Display Both

Select	Resource Activity	Quantity	Comment
<input type="checkbox"/>	Anthropometry	1	
<input checked="" type="checkbox"/>	Assessment Nursing Intake - Adult	1	
<input type="checkbox"/>	Assessment Nursing Intake - Pediatrics	1	
<input type="checkbox"/>	Blood Collection Complex	1	
<input type="checkbox"/>	Blood Collection Complex - Adult	1	
<input type="checkbox"/>	Blood Collection Complex - Pedi	1	

Save Close

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After saving the new resource, the system creates a resource block in the Gantt chart. Multiple instances of the same resource will display together.



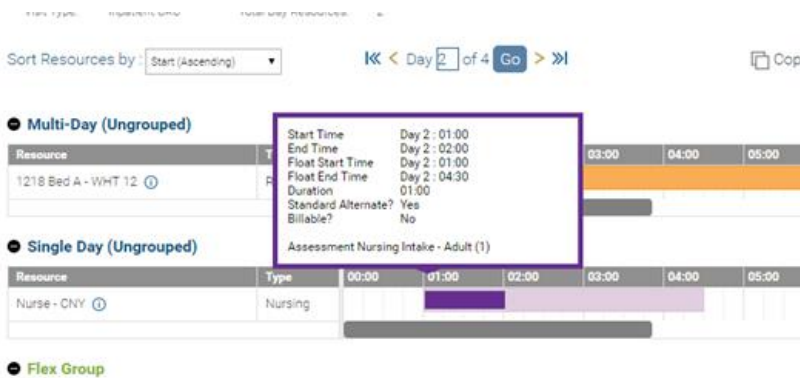
For non-linked Float resources, you can drag the start and end time of the float window.

For Fixed and non-linked Flex resources, you can drag the start and end time of the resource block in the Gantt and those time changes will be auto-saved. You can similarly drag and drop the entire block to another time within the current day, retaining the duration of the resource.

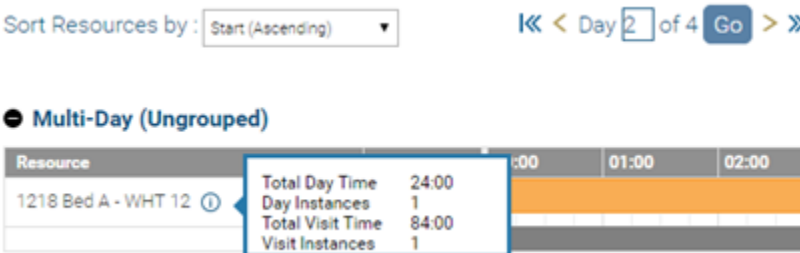
Resource Information Hover

There is additional information you can retrieve by simply hovering over different areas of the page.

Get a quick view of resource information by hovering over the resource block.



View high-level resource statistics by hovering over the information icon.



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Copy, Edit, Delete Resource

Access resource actions by performing a single click on the resource block. You will be able to copy, delete, or edit a resource. Float and Flex resources will have an additional link icon.

The screenshot shows two resource blocks in a scheduling interface. The first block is for '1218 Bed A - WHT 12' (Room) with an orange bar from 00:00 to 04:00. The second block is for 'Nurse - CNY' (Nursing) with a purple bar from 01:00 to 04:00. A purple box highlights icons for copy, delete, edit, and link. A red arrow points to the link icon with the text: 'Click on a resource block to access options.'

Link & Unlink Resources

If you click the Link icon, available on Float and Flex resources, you will receive a popup. The popup will display a list of any other non-linked resources that can be linked to the one you originally selected.

The 'Link Resource' popup window shows a title bar with a close button. Below the title bar, it says 'Link Dietitian, Research - Sub-Location 4 (Day 1 : 06:00 - Day 1 : 08:00) to the following checked resources (select one)'. A table lists available resources:

<input type="checkbox"/>	Resource Name	Resource Type	Resource Start Time	Resource End Time
<input type="checkbox"/>	Nurse Practitioner - Sub-Location 1	Nursing	Day 1 06:00	Day 1 08:00

At the bottom of the popup are 'Link' and 'Close' buttons.

Linking Criteria

Linked Float Resources

The linked resources must have the same float window and same desired resource times. When the algorithm searches for resource availability, it will search these two together and float them together in the window to find an available time.

Float Group

The screenshot shows a 'Float Group' with a minus sign icon. It contains two resources: 'Nurse - Non CRC' (Nursing) and 'MRO/APC - CNY' (Other). Both have purple bars from 01:00 to 04:00. A pink text box says: 'Linked float resources have the same float window and same desired resource times.'

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Linked Flex Resources

The linked resources must have the same duration and be adjacent. In the case of more than 3 linked flex resources, at least 2 of them must be adjacent and the addition can be exactly the same as one or also adjacent.

Flex Group

Resource	Type	00:00	01:00	02:00	03:00
▼ Unlink Group Resources					
Nurse - CNY ⓘ	Nursing	█			
1218 Bed B - WHT 12 ⓘ	Room	█			
Nurse - WHT 13 ⓘ	Nursing		█		

Unlink Resources

There are two methods by which you can unlink resources. Once resources are unlinked, they are moved back into the appropriate Ungrouped section on the page.

Flex Group

Resource	Type				03:00
▼ Unlink Group Resources					
Nurse - CNY ⓘ	Nursing	█			
1218 Bed B - WHT 12 ⓘ	Room	█			
Nurse - WHT 13 ⓘ	Nursing		█		

Unlink action icon available for linked resources upon click.

Unlink an Individual Resource

If you click on the resource block of a linked resource, you will see an “Unlink” icon in place of the “Link” icon. Unlinking in this manner in most cases will unlink the entire group. In cases where the remaining linked resources are still a valid group, the other resources will remain linked.

Unlink the Entire Group

Above each group, there is an Unlink Group Resources option. Using this method will unlink all resources in the group.

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Copy Day

The copy day functionality for inpatient visits allows you to copy the single-day resources from one day to one or more other days in the template.

test inpatient

Sub-Location: WHT 12 Total Resources In Visit: 7
Visit Type: Inpatient CRC Total Day Resources: 6

Sort Resources by: Start (Ascending) Day 1 of 4 Go > >> Copy Day + Add New Resource ⚙ Bulk Actions

Copy Day

Copy Day to

Please note that multi-day (overnight) resources will not be copied.

Bulk Actions

Bulk actions are available for performing an operation on multiple resources at once, or in bulk.

Billable, Non-Billable

Currently available functionality includes marking resources as either Billable or Non-Billable.

When first adding a resource, there is the checkbox option on the form to either mark the resource Billable for the visit or leave it as non-Billable for the visit.

Add New Resource

Resource*

Billable for the visit Standard Alternate?

Resource Category Fixed Float Flex

Resource Start Day* Resource Start Time*

Resource End Day* Resource End Time*

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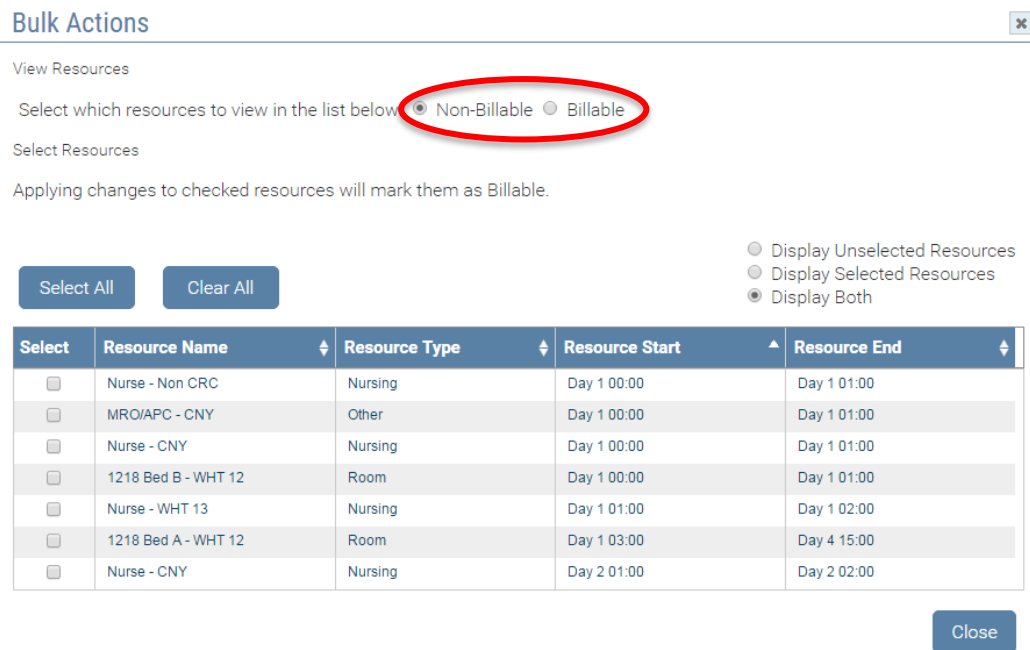
If one or more resources were marked in a particular way and need to be changed, click the Bulk Actions option.



A popup will appear with two views:

- 1) List of all resources in the visit that are currently Non-Billable
- 2) List of all resources in the visit that are currently marked as Billable

Selecting resources from the Non-Billable view and apply changes will change them to Billable and vice versa.



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How the Scheduling Algorithm Works

For relative time visit templates the algorithm looks for visits at 30 mins intervals between the user-selected time range.

For clock time, the algorithm only looks for the exact times based on the template resources within the time range.

The algorithm walks through the following checks and determines if the time slot is available or unavailable for scheduling the visit:

1. Availability of the **fixed resources and individual (non-linked) flex resources**
 - If the preferred resource is not available and the resource was added to the template with the option of Standard Alternates checked, then the algorithm will then check availability of those alternate resources.
2. Availability of **individual (non-linked) float resources** are available
 - If the preferred resource is not available and the resource was added to the template with the option of Standard Alternates checked, then the algorithm will then check availability of those alternate resources.
3. Availability of linked **float** resource in a group
 - If the preferred resource is not available and the resource was added to the template with the option of Standard Alternates checked, then the algorithm will then check availability of those alternate resources.
4. Availability of linked **flex** resource in a group
 - If the preferred resource is not available and the resource was added to the template with the option of Standard Alternates checked, then the algorithm will then check availability of those alternate resources.
5. Availability of the **subject** (Is the subject already booked at that time?)

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Template Building Best Practices

In what order should resources be added?

Approach 1

Always start with room (if applicable—or the most rate-limiting resource if no room is involved) and work from there chronologically.

Approach 2

Always start with room (if applicable—or the most rate-limiting resource if no room is involved) and then add any known high-demand, rate-limiting resources regardless of chronology.

Float, Flex, Linked Resources

It is best when possible to limit the number of float and flex. Keeping these types to no more than a handful each helps performance during a search since the algorithm will have less permutations to run through.

When creating linked flex or float groups, it is recommended to link no more than 2 resources together in each group. Similar to the number of float and flex resources in a template, keeping the number of resources in a linked group to a minimum will help reduce restrictions and permutations for the search algorithm.

Clock Time vs. Relative Time

A relative time template is really useful for short inpatient visits that could start at any time of day. They provide great flexibility, but there is a bit of work needed to get the template right.

Clock time templates are useful for longer visits that require a lot of planning to run and should start at a specific time of day. They make it easier to understand how a visit should be staged in actual time, but it is not as flexible in scheduling.

Billable Resources

If part of a resource duration is billable—for example if a tech is required for 45 mins, but 15 mins are billable— the billable portion of that resource should be included in the template on a separate line and checked off for billable resource. This is helpful if the billable information will be used for analysis later.

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Room Resources

It is recommended that rooms be booked for the entire duration that the subject will be in the room, even if the visit activities do not use other CRC resources (personnel, etc.)

If a subject leaves the unit during the visit and the off unit time is long enough to accommodate another visit, the room should be booked only for the time that the subject will be on the unit.

It may be desirable to add extra time onto the room duration to account for cleaning time if that cleaning time should block out another visit. The actual visit duration used by the subject will be calculated from total time between check in and check out of the visit. Adding this room cleaning time is optional and may not work for all sites.

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