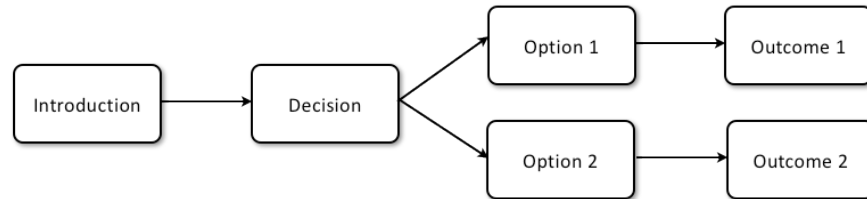


Authoring Guide

Introduction

A virtual patient case is made up of interconnected **nodes** each representing pages containing case content and navigation options. Learners progress from one node to the next by making decisions that take them down different paths leading to variable outcomes.



Authoring virtual patient cases involves 3 primary activities:

- 1) **Designing** – using the Case Map,
- 2) **Adding content** – using Node Edit screens, and
- 3) **Publishing** – to a specific audience, from the Case Details page.

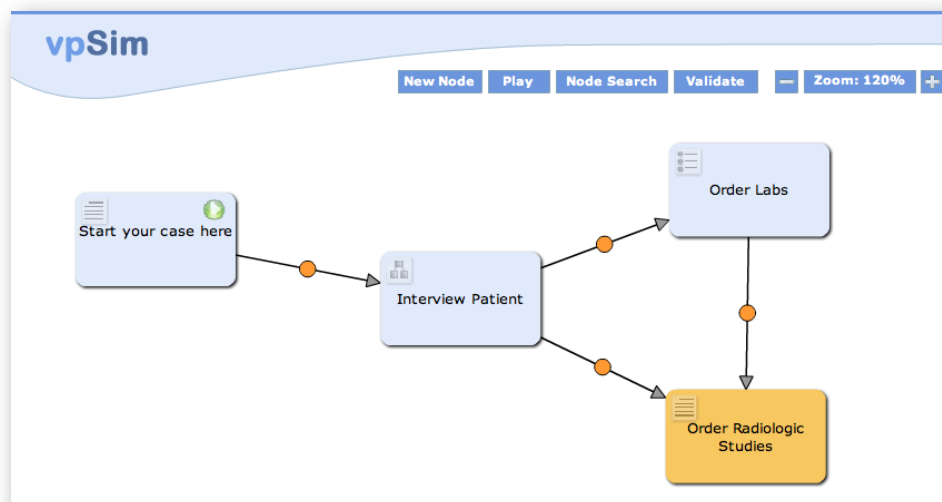
In addition to this guide please view the online videos, tutorials and guides available from the “Help” link.

Create a New Case

- Log on to Decision Simulation at <http://vpsim.pitt.edu>. A list of cases available for viewing and editing will appear.
- Click the **Create Case** link at the upper-center of case list screen.
- Enter a **Title** for your case (required). Click the **Create Case** button at the bottom of the screen to begin authoring immediately.

Design the Case - the Case Map

- The **Case Map** opens with a single starting **Node** titled “Start your case here.” Use this map to design or “storyboard” your case by adding nodes and connectors in series or branching along different paths.

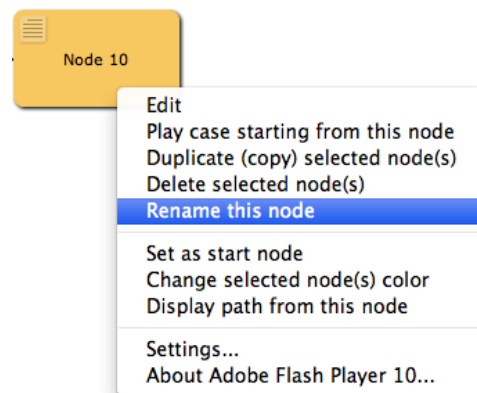
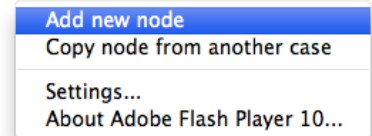


Add Nodes

- Click the shaded edge of a node, drag out a connector, and drop a new node on the map.

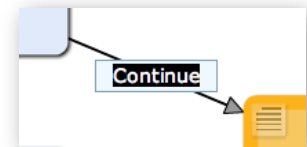


- Also add nodes by right-clicking on the stage and select **Add new node** or click the **New Node** button at the top of the map.
- Move nodes by clicking and dragging from their center.
- Move connectors by clicking and dragging from pointed end of arrow.
- Right-click on node to Edit, Play, Duplicate, Delete, Rename, etc.
- Select multiple nodes by holding down the **Command** key. Drag or right-click while continuing to hold the Command key to perform the same action on more than one node.



Connectors

- Create new connectors by click-dragging from the edge of one node to the center of another.
- Change a connector's default label by typing over it at creation or clicking the orange connector dot. The target node title mirrors the connector label when creating new nodes in the map and thereafter can be edited independently.



Terminal Nodes



A node without any connectors exiting from it is automatically regarded as a **Terminal Node**. Terminal Nodes mark the end of a case; either because they learner has completed the case successfully or has come to a dead end.

Node Editing

Open the **Node Edit** screen by right-clicking on a node and selecting **Edit** from the drop-down menu. Leave the case map open to aid in navigating through the case. The Node Edit screen is where the case content the learner will view is added and navigation options are specified. There are four node types, 1) Narrative, 2) Branching, 3) MCQ and 4) Inquiry. These are defined below.

The screenshot shows the 'X-Sim' interface for editing a node titled 'Order Laboratory Tests'. The interface includes a top navigation bar with the 'Virtual Patient University' logo and user information (James McGee, Logout, Help). A 'My new Virtual Patient case' header is visible. On the left, a sidebar lists four node types: NARRATIVE, BRANCHING, MCQ, and INQUIRY. The main editing area contains several fields: a title field, a body text field with a WYSIWYG editor, an instructions field, and a list of choices. Each choice has a 'choice' label, a 'target node' dropdown menu, and a 'preview button' (a green play icon). The choices shown are 'Complete blood count' and 'Electrolytes'.

The Node Editing screen

1. **Node types** selects between the four interactive node types: Narrative, Branching, Multiple Choice Question and Inquiry. See below for details on each type.
2. **Node title** as it will appear on the Player. Type directly into this field.
3. **Body text and media** opens a WYSIWYG text editor with a range of formatting options and access to the Media Gallery for uploading and placing images, video, documents and other media.
4. **Instructions** optionally appear above the navigation choices, if left blank no instructions are shown.
5. **Choices** are the on-screen links that the learner selects to advance to another node or select a choice for a multiple-choice question and inquiry question.
6. **Target node** indicates which node a choice will link to. Select from drop-down list or create new node from here.
7. **Preview**  button toggles Edit to Player mode to preview what the node will look like and how it will function for learners. Toggle back from Preview with the similar Edit  button on the Player window.

Data entered is automatically saved while typing. The **DONE** button saves any remaining data and closes the Node Edit screen.

Node Types


There are four types of nodes, each with different learner interactivity options for specific purposes. When switching between node types the authoring system will try to retain data already entered but some loss can occur when moving between dissimilar node types.

- **Narrative Node**  - moves learner linearly from one node to the next

Narrative Nodes are used to advance linearly through the patient’s story. They simply link from one node to the next. They are best used to start cases, provide details and feedback, or direct back from a dead end path.

- **Branching Node**  - learner chooses from two or more node branches

Branching Nodes require the learner to make decisions that will take them down different paths of the case. Each *Branching Node* has two or more choices that direct to other nodes.

- **Multiple Choice Question (MCQ) Node**  - learner answers a question before moving to next node

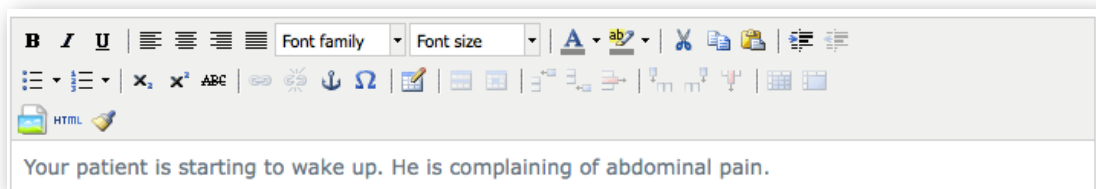
Multiple Choice Question Nodes poses a question to the learner with list of choices with one correct answer. The user cannot continue until the question is answered correctly. Each choice can be associated with feedback to explain why a choice is right or wrong.

- **Inquiry Nodes**  - learner can select many options a view response; moves to next node at any time

Inquiry Nodes display any number of choices, similar to *MCQ Nodes* but does not require a correct answer to proceed. Each choice is associated with feedback either to give the learner additional information, have the patient respond, or other simulated dialogues. This type of node is useful for interviewing a patient, performing a physical exam or selecting from a list of diagnostic tests.

Node Text

Text is added to a case by clicking the “Add text and media” field. This opens a WYSIWYG editor where both text and multimedia are added. Word processor-like formatting options are available along with insertion of hyperlinks and media.



Media Gallery

Media is added to a case along with text from the WYSIWYG editor. Click the Media Gallery button to open a window to upload media, size and place it on the screen with and without text wrapping. More than one media element and type of media may be added. See the online module entitled “TUTORIAL: Using Multimedia with Decision Simulation” for detailed instructions. Supported media types:

IMAGES	AUDIO	VIDEO & ANIMATION	DOCUMENTS
JPG, JPEG (Joint Photographic Experts Group)	MP3	FLV, SWF (Adobe Flash)	DOC, DOCX, XLS, XLSX, PPT, PPTX (Microsoft Office),
GIF (CompuServe Graphical Interchange Format)		MOV (Apple QuickTime)	PDF (Adobe Acrobat)
PNG (Portable Network Graphics)		Embedded (YouTube, Vimeo, others)	

Media is uploaded to the Gallery either from your computer or from a location on the Internet. With either option, a copy of the media is saved and remains with the case even if the original is deleted or moved. Images, video and other media elements may be used repeatedly within a case.

Add Case Media to Gallery

Upload media from your computer (Maximum file size is 50 MB):

Choose File

No file chosen

Import Files

Or upload an image from the web:






http://

Upload

Case Media Gallery

Current Media

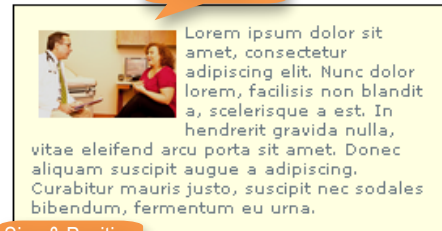
Sort by: File name

	111255724.jpg	[add]
	GI-ROUNDS-047.jpg	[add]
	GI-ROUNDS-054.jpg	[add]
	GI-ROUNDS-064.jpg	[add]
	GI-ROUNDS-078.jpg	[add]

Display Options

Select media from the gallery and click 'add' to insert it on to this page. Choose the placement and size of your media below. Note that media will appear as grey placeholders in the editor until saved.

Preview



Size & Position

Media Position: Top left (with text wrapping)

Media Display Size: Medium (320px by 320px)

Add Optional Rollover Description

Finish

Insert Media

Cancel

Images and other media elements can be placed anywhere in and around the body text on a node page either in their original size or scaled to standard sizes for consistency throughout your case.

Case Navigation Preferences

There are three choices that control how the learner is allowed to navigate through your case. From the Case Details page the **Navigation Panel** is set to:

- **None:** No case history panel appears on the Player screen; therefore learners may play the case forward only. This is useful for examinations and linear cases.
- **Review:** A case history panel is shown with a sequential list of nodes the learner has visited. The learner may go back and view nodes but not change choices previously made.
- **Open Navigation:** Allows the learner to freely view previously visited node and try different choices and paths. This does not change the learner's previous decisions or scores and he or she cannot "undo" a mistake. Use this for cases where you want the learner to experiment with different possibilities or while evaluating the case.

Case History

Using multimedia in a virtual patient case
Quick start to using multimedia
More information
Using specific media types

Case Publishing





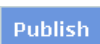
Publish


Before a case is accessible to learners an author 1) selects which users can access the case, 2) validates the case, and 3) publishes it.

- 1) Select who can access a case from the Case Details screen, **Playable by...**
 - i) **Public** setting allows anyone on the Internet access the case, regardless of login status.
 - ii) **Logged in Users** allows any authenticated user within an institution to access the case.
 - iii) **Specific Users, Groups, or Institutions** makes the case available to specific users, predefined groups of users, or an entire institution.

- 2) **Validate** checks for logical and structural errors within a case.
- 3) **Publish** locks the case from further editing and makes it visible to learners. Until a case is published it can only be viewed and accessed by the owner, co-authors, and reviewers.

To Publish a case:

- a. From Case Details click the **Publish** button on the left.
- b. A new window will open and automatically validate the case.
 - i. Critical Errors  will prevent users from successfully playing the case and must be fixed before the case is published.
 - ii. Warnings  signify potential problems that could prevent the case from playing predictably. Some warnings may be the result of deliberate design choices and therefore can be ignored.
- c. At the bottom of the publish window is an overview of the case settings.
- d. After fixing errors and reviewing warnings and settings click  to release the case to learners and lock it from editing.

Unpublishing is required to make any changes to a published case. From **Case Details** click  to remove it from view by learners and unlock it for further editing. A case that has been unpublished will no longer be visible to learners, and will automatically and without warning disable anyone who is currently playing it.

Counters/Rules

- Select the **Counters/Rules** option from the top of the **Case Details** page. There are six counters 1) Cost, 2) Status, 3) Score, 4) Steps, 4) Time (author defined), and 5) Real Time. By default no counters are enabled in a new case.
- Enable counters to begin tracking related data. Authors can choose whether or not to show the counter values to the learner while playing a case.
- An unlimited number of rules may be applied to any or all enabled counters. Authors use Boolean equations to set criteria where the learner will jump from one node to another unconnected node.
- See the Counters/Rules page for more specific information.

Reports

The Player records every step a learner takes while playing a case. A detailed report of these steps, including counter values and cumulative data can be displayed or output as an Excel spreadsheet. These reports are excellent tools for learner assessment and case refinement.

- View **Reports** from the Case Details page by selecting the icon on the left.
- From the Reports page, select **User Access Summary**.
- A list of users, when the case played and scores is displayed. Use the **Export to Excel** button to download an Excel spreadsheet with user data.
- Select [[details](#)] to view the specific nodes traversed by a particular users.
- Additional reports and methods to extract and manipulate data are available for custom Decision Simulation installations.