

How to create an algorithm in Word

Algorithms should step the reader through a series of questions or decision points, leading logically to a diagnostic or treatment plan. Here are some simple rules for creating good algorithms:

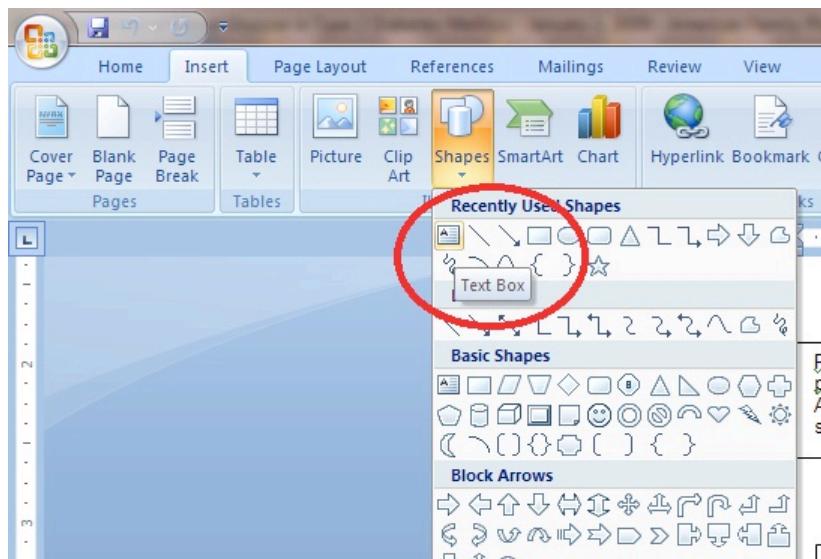
- 1) Begin with a single “entry point,” such as a question, that has at least two or more possible responses or outcomes. For example: “Patient with cough. Does he or she have fever, tachycardia, or tachypnea?”
- 2) Each following question (or decision point) should also be in a box and have 2 or more response options. Use these outcome options to label the paths between the steps in the flowchart. Each arrow leaving a box should have a path label. Examples with their response options include:
 - a. “Chest radiography findings” →
 - i. Infiltrate
 - ii. Other abnormality
 - iii. Normal
 - b. “Profuse bleeding (more than 10 pads/day)?” →
 - i. Yes
 - ii. No
 - c. “Treatment options” →
 - i. Medical treatment
 - ii. Surgery
 - iii. Observation
- 3) Note that each question or decision point has 2 or more responses. Ensure that the responses cover all possible diagnostic or treatment options, and that they are logical (for example, mutually exclusive and without overlap).
- 4) Your boxed question or decision point always requires a path (e.g., arrow or line), and a path label (e.g., yes or no; abnormal or normal results; hemodynamic instability or hemodynamic stability). These arrows lead to the next box, containing the next question or decision point.
- 5) Make sure that the approach outlined is consistent with the text, practical, and based on good evidence.
- 6) Make the layout clear and succinct, and avoid confusion. Make sure that each box has an arrow going to it or leading from it, if it needs one.

See page 6 for a sample of a good algorithm.

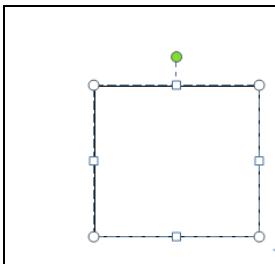
INSTRUCTIONS: MS Word 2010 on a PC (For Mac instructions, go to page 3)

How do I create the boxes?

Select “Insert,” then “Shapes,” and choose the Text Box option:



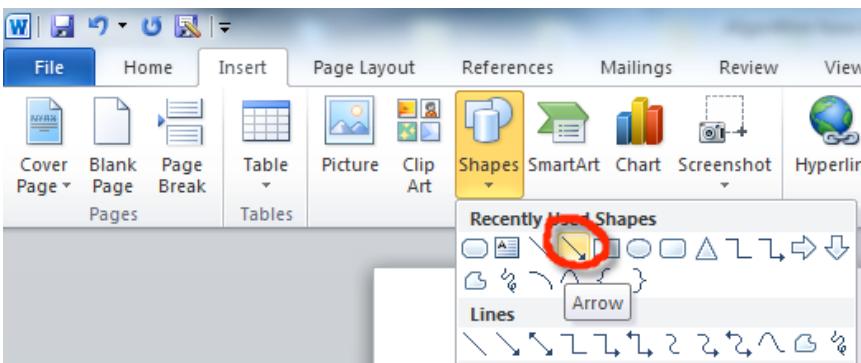
Drag the cursor across the document to customize the size of the text box. Click inside the box to begin typing. The text box can be moved or resized by clicking into the box and dragging the borders:



How do I create a path label?

Path labels must also be inserted using the Text Box feature. When typed onto the page as regular text, labels quickly lose their relationship to the rest of the algorithm and repositioning them becomes difficult.

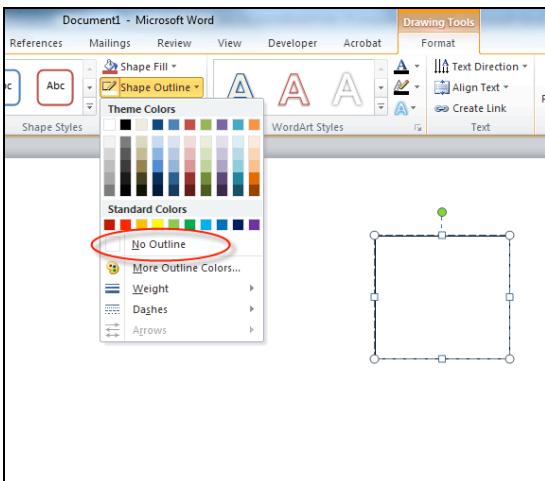
First, return to the “Shapes” menu and select the most appropriate arrow option for your path:



Use the cursor to draw the arrow between the text boxes. Arrows can be resized as needed.

Next, create a Text Box for the path label. To avoid confusion, the Text Box’s borders should not be visible. After placing the box on the page:

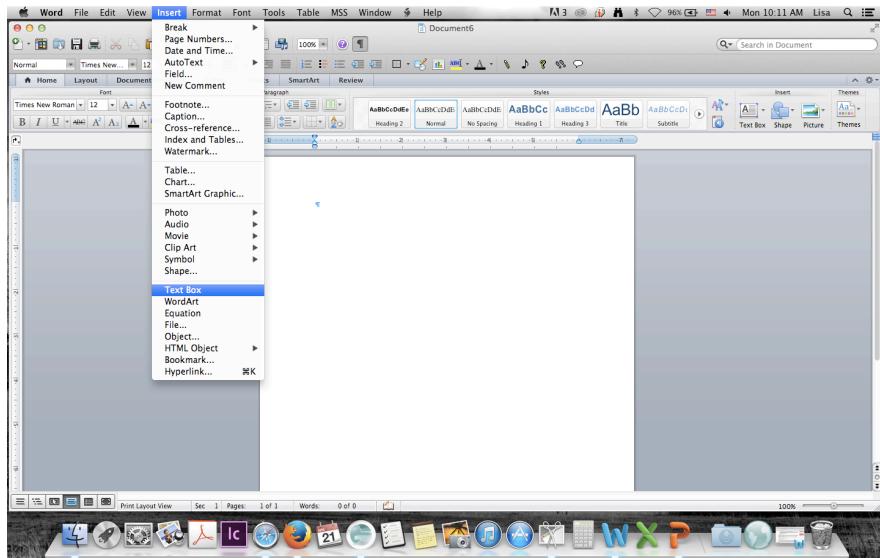
- 1) Click into the Text Box
- 2) Select “Shape Outline” in the Format tab
- 3) Select “No Outline” in the dropdown menu



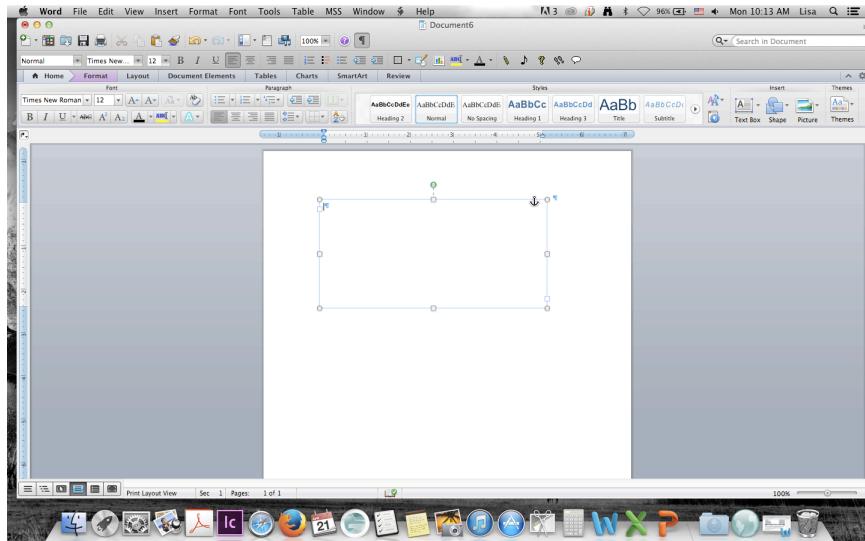
INSTRUCTIONS: MS Word 2011 on a Mac

How do I create the boxes?

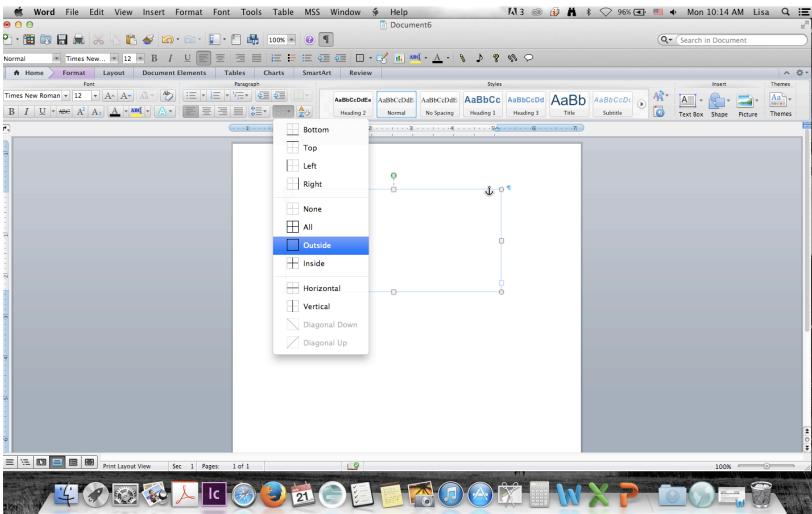
Select “Insert,” then “Text box.”



You can then draw a box using the cross-shaped tool by clicking and pulling outward until you reach the size that would fit your text. You can add your text to the box. The box size can be adjusted by clicking on the box, and using the small circles to pull the sides/corners to the appropriate height/width. The entire box can be moved by clicking on the box and dragging the box to the new location.



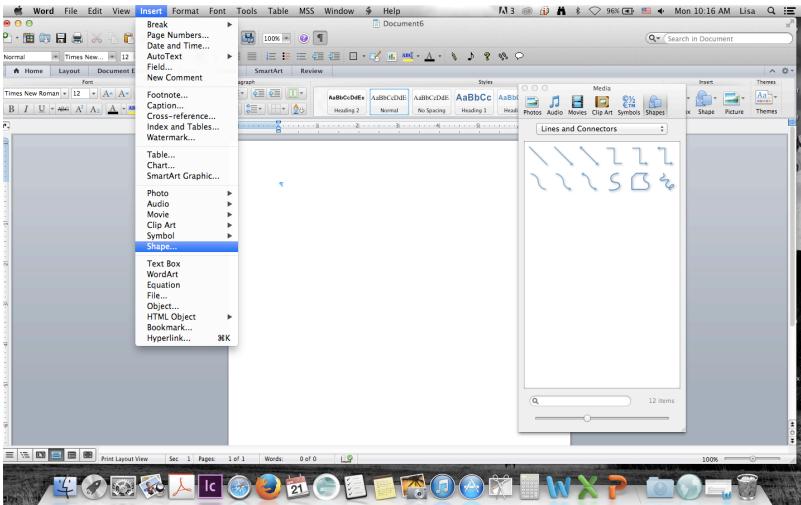
To add a frame around the text box, click on the box to select it. Then go to the “home” tab and choose the border button. From there, you can select “outside.”



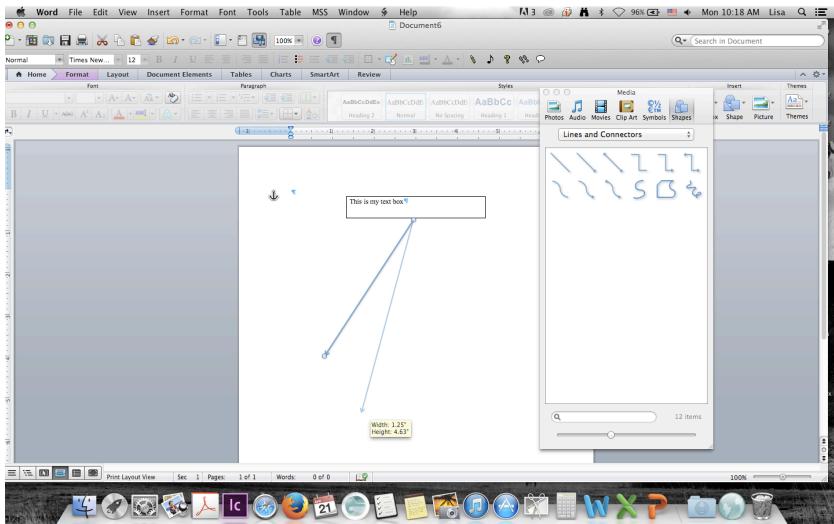
How do I create a path label?

When adding the path labels, please do not type the words next to the path labels, because they quickly lose their relationship to the lines and arrows. Instead, create a new text box without a frame (as outlined above) and type in your path label.

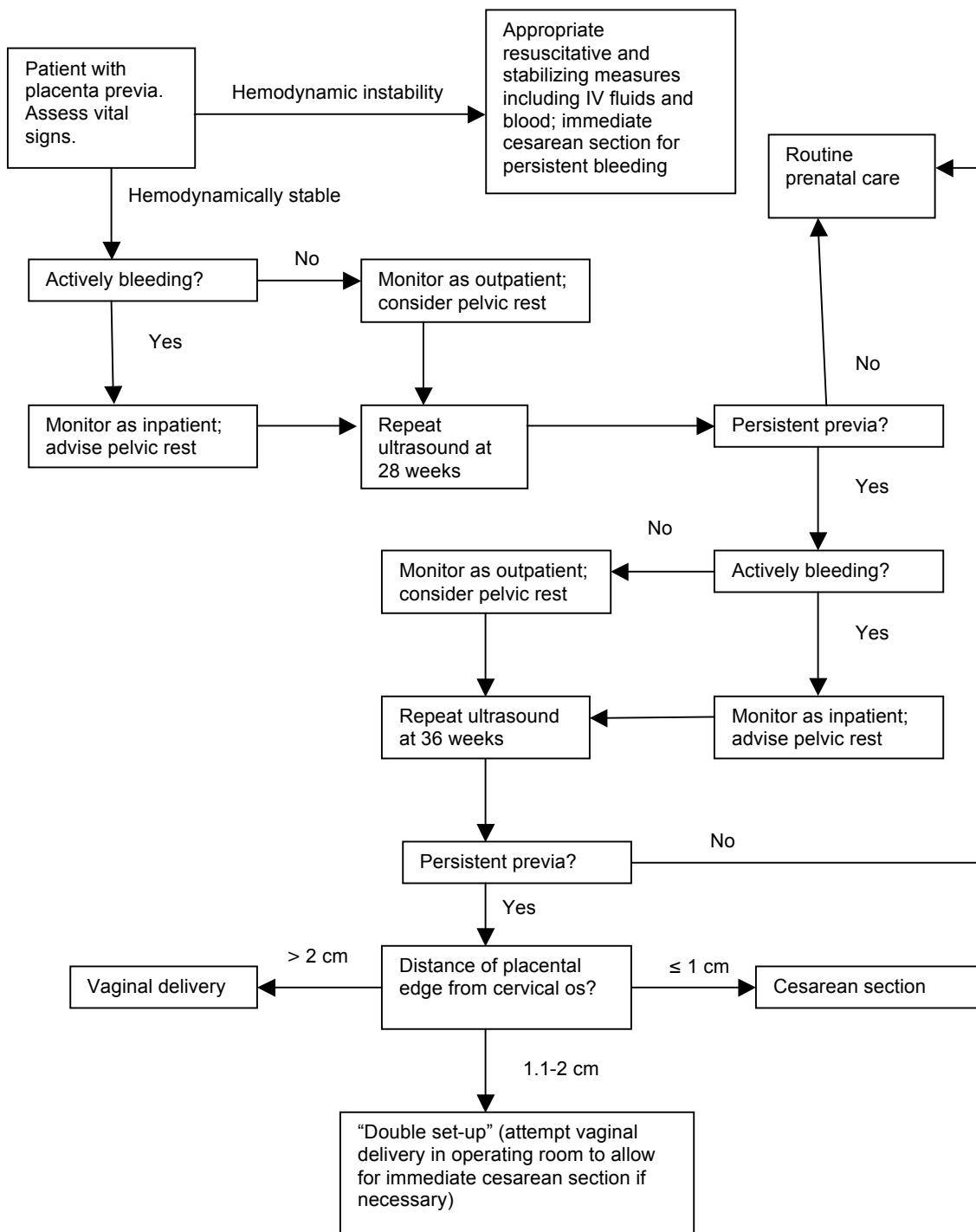
First, create the line or arrow by selecting “Insert” then “Shape.” You will get a pop-up window showing all of your shape options. You can narrow this using the drop-down menu in the shape pop-up window by selecting “lines and connectors.”



Choose the arrow type you'd like to use by clicking on it. You can then go to your Word document and draw the arrow in the direction and length desired by clicking on the location you would like the line to begin (likely below or next to your boxed question or decision point) and pulling the arrow outward to the desired length. The arrow can be adjusted or moved by clicking on it dragging it to the appropriate place, or clicking on the circles and dragging the line to shorten or lengthen.



Sample Figure 1. Management algorithm for placenta previa.



[Algorithm how-to procedure]