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Identify Data to Be Collected for Measuring Redesign Outcomes

The purpose of collecting data before, during, and after workflow redesign is to detect whether a change is an improvement. After issues from the current state are analyzed, the team should set specific goals. For example, if the practice would like to improve the capture of smoking status in the EHR, the team should collect data about the number of patients with smoking status entered correctly before and after workflow changes have been implemented.

Map Future “To Be” Processes

Designing the solution for the future state should focus on the efficiency, effectiveness, and quality of care. Ideally, the future state will have fewer steps, faster tasks, and/or less opportunities for failure. Waste should be minimal. After the team has an understanding of the new process, it should map the future process using a diagramming tool so that everyone can visualize who will be doing which task.

Test New Workflows and Processes

Before deploying the new workflows throughout the organization, it is helpful to test the workflows in a controlled environment with as much variability as possible. Try testing the workflows during different times of the day and with a variety of individuals who will be performing the tasks. Adjustments can be made to the new workflows as needed.

Train Individuals on New Workflows and Processes

After the new workflows are field tested, it is important to take the time to properly train all individuals who will be performing the tasks. This important step will enable staff members to complete tasks with high quality, efficiency, and safety.

“Go-Live” With New Workflows

During “go-live” of the new workflows, it may be necessary to lighten the appointment schedule or patient load. It would also be helpful to have extra team members available to help coach individuals through the new workflow and solve any problems that may arise.

Analyze Data and Refine Workflows

At a set frequency, the team should analyze the data and determine whether goals are being achieved. If not, the team will need to investigate any bottlenecks and failure points. Based on the analysis, new workflows should be refined.

USING SOFTWARE TO SUPPORT WORKFLOW REDESIGN

There are several out-of-the-box software tools that allow users to create workflow diagrams by using drag-and-drop interfaces. One commonly used tool utilized in the health care industry for workflow maps will be used to demonstrate how to create a workflow diagram. The tool we utilize is Microsoft Visio Premium 2010 (Microsoft Corporation, 2014). Steps to designing a workflow in Visio are described later. We have also provided a template with standardized shapes used within Visio and other software applications that are common best practices for process mapping. The shapes include such elements

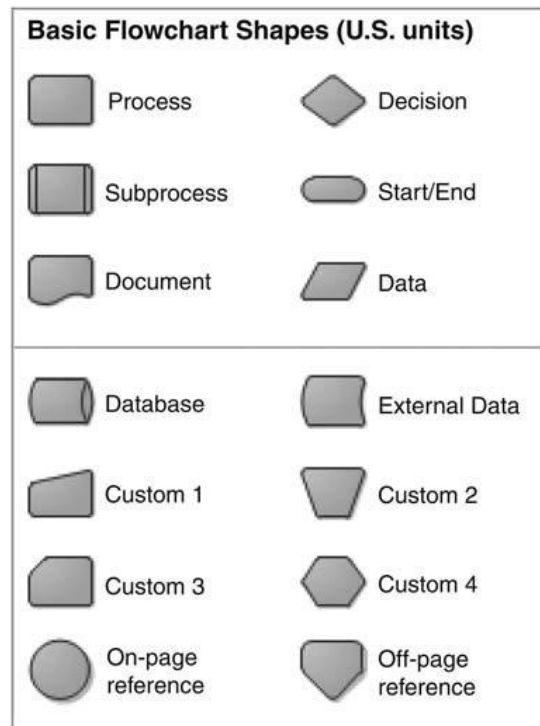


FIGURE 9.3. Common standardized process mapping shapes.

Source: Microsoft Corporation (2014).

as squares for steps in a process and diamonds for decision points (see Figure 9.3 for commonly used shapes in Visio; Microsoft Corporation, 2014).

Steps Needed to Create a Workflow Diagram

The steps used to create a workflow diagram in many of the software applications are similar. In Microsoft Visio 2010, the following steps are used to create a simple workflow diagram:

- ▶ Launch Microsoft Visio.
- ▶ Select a template or blank drawing.
- ▶ Click and drag shapes from the shapes column into the drawing.
- ▶ Double-click on a shape to add or edit text within the shape to describe the step in the process.
- ▶ Click on “Connector,” highlight a shape, and drag to another shape to add lines with arrows to indicate the flow of steps or tasks in the process.
- ▶ Shapes and connectors can be resized and moved by clicking a corner and hovering over the object until the cross with arrows or diagonal resizing arrows appear.
- ▶ Shapes and connector can be deleted by clicking on the object and clicking the “delete” button on the keyboard.
- ▶ Save and name the diagram.

OFFICE VISIT WORKFLOW TEMPLATE

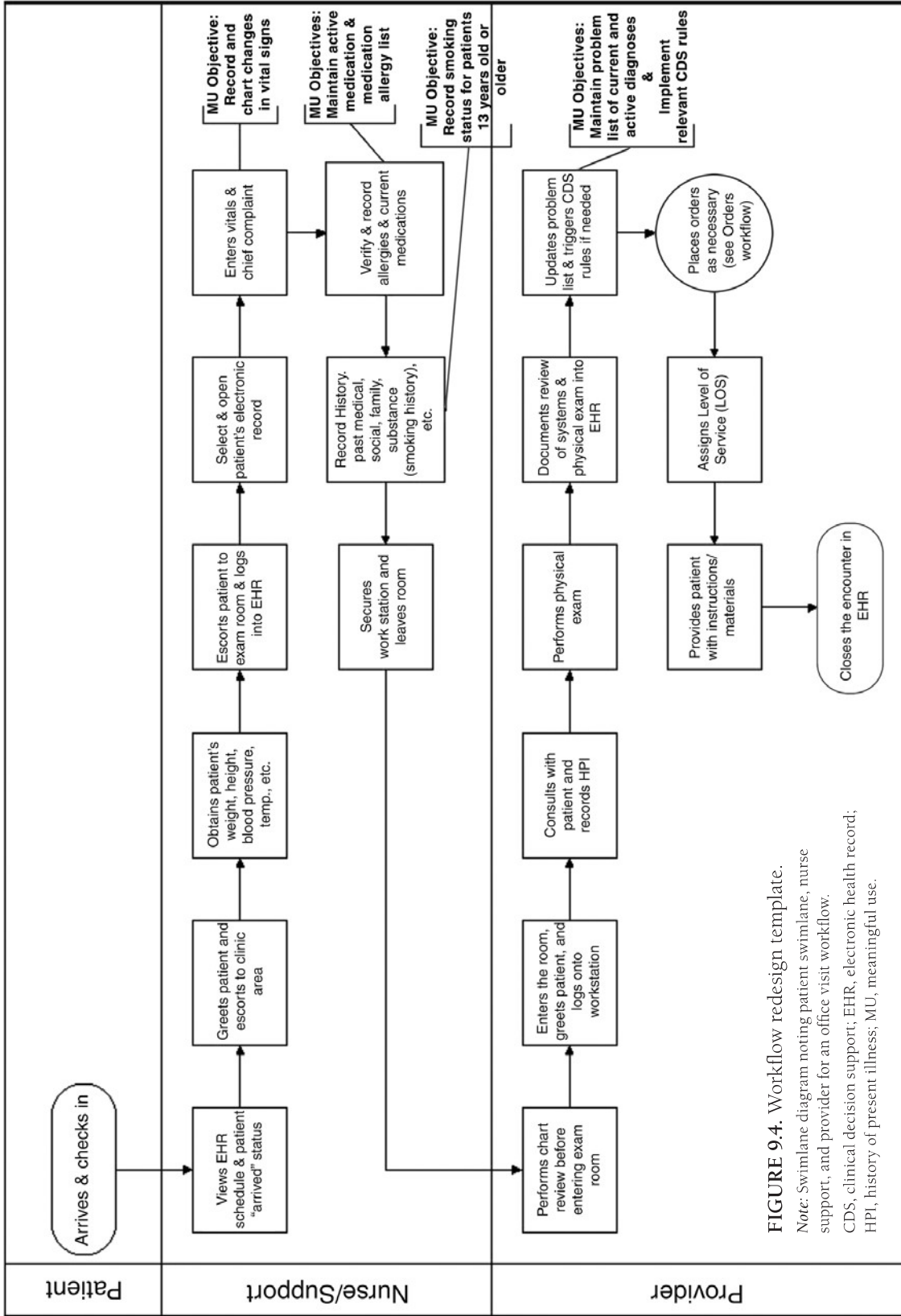


FIGURE 9.4. Workflow redesign template.

Note: Swimlane diagram noting patient swimlane, nurse support, and provider for an office visit workflow. CDS, clinical decision support; EHR, electronic health record; HPI, history of present illness; MU, meaningful use.

The aforementioned steps reflect a basic workflow, but Visio enables the end user to design swimlane diagrams with roles and responsibilities depicted as well as shapes that reflect decisions, processes, data, documents, and other important functions you may wish to reflect in the diagram. See Appendix 9.1 for screenshots reflecting the steps mentioned here and other functions of Microsoft Visio.

Working With Templates

The RECs across the country focused a great deal of effort in designing support services for providers and small hospitals in workflow redesign of processes, as they adopted an EHR moving from paper to electronic environments, or as they upgraded old systems to certified EHR systems. The RECs participated in CoPs to collaborate and share lessons learned and best practices to help providers meaningfully adopt EHRs. One of these CoPs was focused on practice workflow and redesign (PWR). The PWR CoP identified a series of high-priority workflows in the ambulatory setting and developed templates to help providers kick-start the process of EHR adoption and meaningful use (Health Information Technology Research Center, n.d.). The workflow templates developed by the PWR CoP included “meaningful use” flags on certain steps within a process where meaningful use measures could be collected. Figure 9.4 illustrates a swimlane diagram reflecting the workflows for a routine office visit in the ambulatory practice setting. The full set of workflow templates developed by the PWR CoP is available at www.healthit.gov/node/291. Templates like the ones developed by the PWR CoP can help organizations by using the standardized templates to begin the process. The following are recommended steps for using a template:

1. Identify a template useful to the process you intend to improve.
2. Convene a group of stakeholders involved in the process and have the group examine the template and mark up (pen and paper or electronic approach) the template as to how their process differs from the one reflected in the template. This step frequently identifies additional steps that may equate to potential inefficiencies; often issues are noted by the end users in their notes on their process when comparing it to the template.
3. Use Visio or a similar tool to recreate the workflow based on the organization’s notes. Your template may also be a Visio diagram that allows you to take the template into Visio and modify the diagram.
4. Return the modified workflow to your stakeholders and verify that what you have designed in the new workflow diagram is reflective of their process.
5. Finally, observe the process several times in the practice setting to validate that the workflow diagram represents all steps, roles, and responsibilities within the process. Frequently, end users do not always realize what “everyone” does in a process. Observation helps verify what is really occurring and not the perception of what the end user believes is happening. Again, issues in the process and inefficiencies are often identified through observation.
6. If changes are noted by the observer, they should be noted on the diagram and a third version of the diagram prepared.