APPENDIX D: FLOWCHARTING

ADDITIONAL RESOURCES:

• About this Appendix
• High-Level (Top-Down) Flowchart
• A Standard (Detailed) Flowchart

About this Appendix

To better understand the opportunities for improvement, it is important and useful for the team to have a clear picture of the current system of cardiovascular care in their practice. Often team members know what their own work entails, but don’t know what happens before or after their involvement with the patient. Even if you think you have a good idea of what the process is at your site, someone else may picture it differently.

“The best way to come to a common understanding of the process is to develop a flowchart of the process as a team.”

Use a flowchart to illustrate the major steps in the system of cardiovascular care as they occur now – not as you would like it to be. That will come later.

A flow chart:

- Helps create a common understanding of the current process
- Helps define the scope of the process improvement effort
- Helps illustrate the complexity of the process
- Helps focus the team’s attention on unnecessary steps, duplicative work, or gaps in the process where things might fall through the cracks
- Helps identify inconsistent, variable, and incomplete work processes
- Helps identify potential data collection points

Use a flowchart to:

- Examine a process for the purposes of planning or problem solving
- Compare what should occur in a process to what is actually happening
- Provide a broad depiction of the process with minimum detail
- Establish process boundaries and set the scope of the improvement effort

There are different types of flowcharts. The most common are:

- A high-level (top-down) flowchart depicts the major activities and essential steps in a process with minimum detail. See page 2 of this Appendix.
- A standard (detailed) flowchart provides a more detailed picture of everything that happens at each step in a process, including major decision points. See page 4 of this Appendix.
High-Level (Top-Down) Flowchart

Purpose

- To create a common understanding of the essential elements of a process
- To define the beginning, ending, and key steps of the process under study
- To focus on the team’s attention on the process, not the individuals involved

Use a High-Level Flowchart to...

- Examine a process for the purposes of planning or problem-solving
- Compare what should occur in a process to what actually does happen
- Get a broad depiction of the process with minimal detail
- Help establish process boundaries

How to do a High-Level (Top-Down) Flowchart

1. Outline the purpose and objectives of the activity. Describe the process to be flowcharted so that everyone has a clear understanding. Be very clear whether the flowchart should depict the current process or the desired (theoretical) process.

2. Agree on the boundaries of the process - the beginning and ending steps. For example, the care process could be defined as beginning with the arrival of a patient at a clinic and ending with follow-up contacts. Or, it could begin at home when symptoms occur, or begin at the point of diagnosis. This needs to be made clear up front. Some things might be out of your control and thus outside the scope of your improvement effort. The boundaries may change as you see the process unfold from everyone’s perspective. It is OK to be flexible at this point.

3. Identify the 6-12 major activities involved in the process within those boundaries. Define only the essential tasks within each major activity. Arrange these activities and tasks in order of occurrence.

4. Begin constructing a flowchart of the activities the team outlined. Place the major activities in boxes across the top. Link the boxes with arrows to show the direction of the flow or movement through each activity. List key steps in each activity below its box.

5. Review the completed flowchart. Have team members check with other clinic personnel regarding the unfamiliar areas and/or to verify accuracy.

6. Once you have completed your flowchart to the point everyone is satisfied, you have covered all the essential steps and can begin to identify where the gaps, variations, and duplications are and begin to further outline the scope of your QI work.

TIPS:

- Discussion is important. No single person will know the whole process.
- Write your initial activities on sticky-back notes so you can easily reorder them and later transfer them to a written flowchart on a poster board or a wall chart.
- Keep moving. Do not spend more than five minutes on an activity or task.
- Verify the accuracy. Flowcharts that do not reflect actual processes can be dangerously misleading in a QI effort.
**Example of a High-Level Flowchart:**  
*Flowchart of a current in-office cardiovascular disease (CVD) care process*

<table>
<thead>
<tr>
<th>Patient is identified as having CVD</th>
<th>Patient schedules appointment</th>
<th>Patient arrives and is evaluated</th>
<th>Diagnosis and treatment plan established</th>
<th>Follow-up planned</th>
<th>Patient departs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient contacts office</td>
<td>Time slot assigned (scheduler)</td>
<td>Patient checks-in</td>
<td>Tests ordered (provider)</td>
<td>Tests, treatment, follow up plans reviewed (nurse)</td>
<td>Documentation in EHR (provider)</td>
</tr>
<tr>
<td>-OR- Patient is referred by specialist</td>
<td>Previsit labs scheduled and performed per provider request and/or protocol</td>
<td>History and physical collected (reception)</td>
<td>Treatment plan reviewed and discussed with patient (provider)</td>
<td>Referrals made (nurse)</td>
<td>Follow up dates entered into tickler file (reception)</td>
</tr>
<tr>
<td>-OR- Health plan identifies them as having CVD</td>
<td>Patient interviewed and chart updated (Nurse/PA)</td>
<td>Medications prescribed (provider)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-OR- Patient presents with symptoms</td>
<td>Test results reviewed by provider</td>
<td>Patient referred to nurse for instructions (provider)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-OR- Patient is screened as having CVD</td>
<td>Exam performed (provider)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A Standard (Detailed) Flowchart

**Purpose**
- To define the complexity of the process
- To identify flaws, inconsistencies, or inefficiencies in a process
- To identify potential data collection points

**Use a Standard Flowchart to...**
- Graphically illustrate details of the process
- Examine key decision points in the process
- Plan a new improved process and study its implications

**How to do a Standard (Detailed) Flowchart**

1. Outline the purpose and objectives of this activity. Describe the process to be flowcharted so that everyone has a clear understanding. Determine whether the flowchart should depict the actual (current) process or the desired (theoretical) process. This will depend upon where you are in the QI process.

2. Set the boundaries of the process, at least the first step.

3. Identify all activities and the decisions involved in the process within the set boundaries. Write all the activity and decision steps on cards or sticky-back notes, then transfer the notes to a flip chart and arrange them in order of occurrence.

4. Begin constructing the details of the flowchart. Determine the appropriate symbol for each step. When you are unclear about a step, use a cloud symbol and ask if someone outside the team can describe that activity.

5. Review the completed flowchart and verify its accuracy by showing it to colleagues and co-workers outside the team.

**TIPS:**
- Use this technique sparingly. You may not need a detailed flowchart if there is not a well-defined process already in place.
- Keep moving. Do not get bogged down in uncertain details or issues. Use the cloud symbol if you get stuck.
- At decision points (diamond shapes), follow one branch to the end before moving to the next branch.
- Ensure that all decision points have both a “yes” and a “no” branch leading from it.
- Capture ideas and issues for further investigation.
Symbols - you may choose to use these symbols to help further clarify the process.

- **Oval**
  - **Terminal** (beginning or end steps)

- **Arrow**
  - **Direction lines** (process flow)

- **Rectangle**
  - **Activity Description**

- **Diamond**
  - **Decision point**

- **Cloud**
  - **Unknown** (uncertain or variable actions)
Example of a Standard (Detailed) Flowchart

1. Begin statin therapy
2. Lipid goals met?
   - YES: Provide ongoing care
   - NO: Adjust dose or change agent
     - NO: Lipid goals met?
       - YES: Provide ongoing care
       - NO: Adjust dose or change agent