



Module Quiz

RPIW Process, Module 2

1. **The purpose of the RPIW process is to eliminate waste and reduce costs. In order to do this, three steps must be followed:**
 - a. Make work procedures as simple as possible, implement multi-process patient processes throughout the clinic or hospital, make prompt equipment modifications.
 - b. Plan, workshop, follow-on.
 - c. Separate human work from machine work, develop defect prevention devices, and apply jidoka to assembly operations.
 - d. None of the above

2. **The Process Owner is responsible for negotiating the scope and boundaries of the workshop and for identifying local area process experts to assist in data collection:**

True False

3. **The KPO supports the RPIW by:**
 - a. Collecting and analyzing data.
 - b. Taking responsibility for follow-on actions.
 - c. Leading the Value Stream Map development.
 - d. None of the above.

4. **The Plan step begins at week -3 and requires a 100% time commitment from the team leader and subteam leader. What is the purpose of the Plan step:**
 - a. To complete the project form.
 - b. To identify and set targets.
 - c. To determine team participants.
 - d. To ensure an efficient and effective RPIW.

5. **Week -3 requires the use of many tools for data collection. Which tool is not used during week -3:**
 - a. The Team Lead Checklist
 - b. SWOT analysis
 - c. The Workshop Summary
 - d. The Project Form

6. **During the Workshop Delivery step (the actual RPIW week), the team performs the Kaizen cycle only once per day:**

True False

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- 7. During the Follow-On step, which of the following take place:**
- Hold the gains achieved and provide a vehicle for continuous improvement
 - Complete actions that were identified during the workshop
 - Expand the scope to supporting areas
 - All of the above
- 8. In the follow-on step, the responsibilities of area management include:**
- Completing all action items immediately
 - Prioritizing facilities requests
 - Formally chartering work group teams to continue the process
 - Educating non-participants on the process to ensure viability
- 9. The team leader is responsible for data collection including the Value Stream Map and Patient-Procedure/Quantity Analysis. When should these items be completed:**
- Week -1
 - Week -3
 - During the workshop
 - A Value Stream Map and Product/Quantity Analysis are optional
- 10. Performing the Kaizen Cycle during the workshop is essential. What is the first step of the Kaizen Cycle:**
- Standardize the new work cycle
 - Eliminate waste
 - Analyze work and identify waste
 - Observe and understand the work

Module Quiz

Value Stream Mapping, Module 3

- 1. As a visual tool, the value stream map helps us to see and understand the flow of patients and information from the patient's perspective. It is a big picture perspective focusing on improving what part of the process:**
 - a. IT part of the process
 - b. Only the materials piece
 - c. The revenue stream
 - d. Whole process
- 2. Why is displaying the current state VSM important?**
 - a. It demonstrates person responsible
 - b. It allows for transparency
 - c. It shows quality metrics
 - d. It highlights the number of staff needed to perform the work
- 3. The Value Stream is primarily management's responsibility since their role is to see the overall flow, develop an improved Lean vision, and lead its implementation:**

True False
- 4. Value stream mapping includes:**
 - a. Supply and equipment flow
 - b. Information flow
 - c. Patient flow
 - d. Both b and c
- 5. Which of the following are used to create value stream maps:**
 - a. Stop watch
 - b. Time observation form
 - c. Pen
 - d. All of the above
- 6. The VSM process includes which of the following:**
 - a. A plan to achieve the future state
 - b. Kanban implementation
 - c. A specific design for load leveling
 - d. None of the above
- 7. When collecting data for the Value Stream Map, one must physically walk the process:**

True False

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8. The component task time is the average of all observed times:
- True False
9. Which of the following are examples of improvement targets that could be determined from a future state map:
- a. Lead time reduction for patients to receive services
 - b. Reduction in number of patients waiting for services
 - c. Lead time reduction for Lab results
 - d. All of the above
10. The goal of the Value Stream Map is to achieve the future state. Which of the following is key to success:
- a. Review the map as needed
 - b. Complete tasks whenever you can
 - c. Stick to the plan
 - d. Getting all tasks completed within 30 days

Module Quiz

Patient-Procedure/Quantity Analysis, Module 4

1. **When developing the vision, it is important to:**
 - a. Review the business objectives for the area
 - b. Ask staff what they think is most important
 - c. Make sure there are no defects in the system
 - d. All of the above

2. **Grouping patients and procedures into families is the 3rd step of process analysis. To group patients with similar routings requires:**
 - a. 50% of the same processes
 - b. 100% of the same processes
 - c. Most of the same processes
 - d. At least 3 of the same processes

3. **The first task of grouping patients and procedures into families is to create a Pareto diagram to graphically display routings. The goal of this task is to:**
 - a. Reduce the number of unique patients or procedures
 - b. Reduce the number of unique routings
 - c. Show the complexity of the routings
 - d. Identify the areas patients should be routed to

4. **The objective of step 4 is to identify cells that provide service to each patient family. Which of the following is not a common way to form a cell:**
 - a. Volume
 - b. Similar process routing
 - c. Unique patients
 - d. Seasonal adjustments

5. **Which of the following would be a common driver when considering a patient cell:**
 - a. All patients are the same
 - b. They require common procedures
 - c. They are high volume
 - d. They all have the same doctor

6. **Which of the following should be considered when moving equipment to form cells:**
 - a. Expense
 - b. Impact on work environment (heat, noise, vibrations, light, dust)
 - c. Impact on external environment (wastewater, steam, dust, smoke)
 - d. All of the above

Module Quiz

7. **When moving equipment to form cells, we should give consideration to modification of that equipment, making it easier to move in the future:**

True

False

8. **Step 6 outlines the logic for assigning new processes to a cell. To do this we must employ:**

- a. A target sheet
- b. A project form
- c. A value stream map
- d. A flowchart

9. **Step 7, the Action Plan Process is key to achieving:**

- a. Defect-free process
- b. The objectives and their related savings
- c. Safe patient care
- d. New staffing plan

10. **Grouping patient processes and procedures into cells will require:**

- a. Equipment quantities
- b. Process cycle times
- c. PQ analysis
- d. All of the above

Module Quiz

5S, Module 5 & 6

1. **How does 5S improve productivity:**
 - a. Makes everyone work harder
 - b. Saves time
 - c. Ensures we have stock on hand
 - d. All of the above

2. **5S promotes safety by ensuring ergonomic movements such as bending, twisting, and lifting are minimized:**

True False

3. **5S is a visual control because:**
 - a. Everything has a place and is in its place
 - b. It is easy to identify when things are out of place
 - c. Both of the above
 - d. None of the above

4. **Red tags are only used for items that are broken:**

True False

5. **Benefits of 5S include which of the following:**
 - a. CEO support
 - b. Accreditation
 - c. Teamwork
 - d. Inexpensive supplies

6. **Photographing the work area happens only at the end of the 5S:**

True False

7. **Inputs are controlled as they enter the work area in which step:**
 - a. Self-Discipline and Standardizing
 - b. Standardizing and Sweeping
 - c. Simplifying and Sorting
 - d. Sorting and Self-Discipline

8. **This step includes neatness and cleanliness to maintain organization:**
 - a. Sorting
 - b. Simplifying
 - c. Sweeping
 - d. Standardizing



Module Quiz

9. Sweeping is the most difficult step of 5S because it ensures we follow through on all agreements:

True

False

10. Teamwork is promoted with 5S because:

- a. The team innovates and creates together
- b. Hazards are removed
- c. Custodial time is saved
- d. Walk areas are cleared

Module Quiz

Mistake Proofing, Module 8

1. **Mistake proofing teaches us to look for:**
 - a. The responsible person
 - b. The root cause
 - c. Unreliable equipment
 - d. Defective processes

2. **Of the following, which are not mistake-prone:**
 - a. Multiple parts, processes, or steps
 - b. Short cuts and work around(s)
 - c. Safe environmental conditions
 - d. New products, processes, or people

3. **The best mistake-proofing ideas often come from:**
 - a. Process owners
 - b. Sponsors
 - c. Doctors, nurses and support staff
 - d. All of the above

4. **Poka-yoke systems help regulate patient flow and prevent defects using:**
 - a. A control system that stops the equipment when an irregularity occurs
 - b. A warning system that signals the team member to stop the process and address the problem
 - c. Both of the above
 - d. None of the above

5. **Which of the following is not one of the main methods for mistake-proofing systems:**
 - a. Contact method (detects whether an item makes physical contact with a sensing device)
 - b. Visual control method (the team member can see the process has been performed correctly)
 - c. Fixed-value method (fixed number of items must be attached, fixed number of tasks must be complete)
 - d. Motion method (senses whether a motion or step in the process has been carried out)

6. **Adding an inspection step to the end of a process to prevent a defect from reaching the patient is waste:**

True

False

Module Quiz

7. “Fix every mistake at the source” is a key Lean strategy for zero defects:

True False

8. An error is the result of an unreliable process, a defect is:

- a. Caused by ineffective standard procedures and processes
- b. The result of short cuts and workarounds
- c. An uncorrected error
- d. All of the above

9. It is possible to reach zero defects in health care:

True False

10. The characteristics of Poka-Yoke include:

- a. Lowest-cost way to achieve 100% inspection
- b. Fastest
- c. Guards against human tendency to forget
- d. All of the above

11. Mistakes are least harmful and easiest to fix:

- a. The larger the number of inspection steps you add to the end of the process
- b. When staff are immediately reprimanded for making a mistake
- c. The closer you get to the time and place they arise
- d. If team members take responsibility for their own mistakes

12. Mistake proofing prevents mistakes before they create defects:

True False

13. The two types of source inspection are:

- a. Poka-yoke and self-check
- b. Self-check and successive check
- c. Poka-yoke and successive check
- d. None of the above

14. When poka- yoke is not possible what is the next fastest corrective action:

- a. Successive check
- b. Stop the line
- c. Visual controls
- d. Self-check

Module Quiz

15. Mistakes are inevitable but reversible:

True False

16. You must eliminate mistakes to have zero defects:

True False

17. The Lean Strategy for Zero Defects includes:

- a. Every employee is an inspector.
- b. Fix every mistake at the source.
- c. When you can't fix on-the-spot: STOP.
- d. All of the above

18. In health care the staff that are allowed to stop the line for a patient safety alert are:

- a. Doctors and nurses
- b. Senior executives
- c. Anyone

19. Poka-Yoke automatically detects, stops and fixes mistakes just after the process step:

True False

20. When you discover a defect, it is important to:

- a. Record who created the mistake
- b. Immediately give feedback to the staff at the source of the defect and work with them to mistake proof the process
- c. Create an inspection step
- d. Notify the manager of the area where the defect occurred

Module Quiz

Standard Operations, Module 11

1. Team member cycle time is the time required for a single team member to complete one cycle of work. It includes:

- a. Waste within the process step
- b. Wait time
- c. Equipment cycle time (automatic time plus load/unload time)
- d. All of the above

2. Provider capacity and patient demand are the same thing and calculated the same way:

True False

3. The purpose of standard operations is to:

- a. Define the number of team members required
- b. Define and control the number of patients in the process (WIP)
- c. Provide tools to balance takt time with cycle times and lead times
- d. All of the above

4. A prerequisite for standard work is that the task is centered on human work:

True False

5. The sequence of steps for developing standard work is:

- a. Establish a standard work that defines normal conditions, eliminate barriers, re-set the standard
- b. Analyze work & identify waste, eliminate waste, standardize the new work cycle
- c. Standardize the work cycle, identify waste, eliminate waste
- d. Observe & understand the work, analyze the work & identify waste, eliminate waste, standardize the work cycle

6. One prerequisite of standard work is that takt time must be known:

True False

7. Type III Standard Work is most common in healthcare because:

- a. All patients go through the same processes
- b. Various tasks are performed for multiple patients
- c. There is no variation with the amount of work
- d. All of the above

Module Quiz

8. If the market requires 55 patient visits in one 8-hour day without a break, what is the takt time:
- a. 1.2 hours
 - b. 325 seconds
 - c. 7.6 minutes
 - d. 8.7 minutes
9. How many team members are required if the market demand is 48 patient visits per 8 hour day with a 60 minute break and the sum of the member cycle times is 98 minutes:
- a. 6 team members
 - b. 10 team members
 - c. 12 team members
 - d. 15 team members
10. Lead time and cycle time must be known to calculate SWIP (standard work in process):

True

False

Module Quiz

Jidoka: Autonomation, Module 15

1. **Transferring human intelligence to automated machinery is an element of jidoka. When in place, jidoka ensures:**
 - a. Takt time production
 - b. Reliability
 - c. Standard work
 - d. Rigor

2. **Jidoka is an essential concept for achieving zero defects:**

True False

3. **In the third step of jidoka development, the team member can leave the equipment at any point:**
 - a. But there is no way to know whether the equipment is producing defects
 - b. And the team member need not worry about defects
 - c. But the team member still does most of the work
 - d. And the equipment will detect a defect and automatically shut itself off

4. **Since team members are reluctant to automate work that is done by hand, jidoka must be implemented without hesitation:**

True False

5. **When separating human work from equipment work:**
 - a. It is important to automate all setup processes
 - b. Hire extra staff
 - c. Keep in mind the ratio of labor and equipment costs
 - d. All of the above

6. **When precision is required for setup procedures, to fully automate the process may require expensive equipment like robots:**

True False

Module Quiz

7. Functions of jidoka include:

- a. Separating expert and novice workers
- b. Developing defect prevention devices
- c. Purchasing smart technology
- d. Utilizing robots

8. During what step is the work shared between team member and equipment:

- a. Step 2
- b. Step 1
- c. Step 5
- d. Step 3

9. Jidoka enables patient flow processes to keep equipment running without human assistance but still require supervision:

True

False

10. Applying Jidoka requires the use of this kaizen tool:

- a. Project form
- b. Spaghetti diagram
- c. Standard work combination chart
- d. Workshop summary

Module Quiz

Report Out, Module 18

1. The 20-minute video of Before/After Kaizen is optional.

True False

2. Which of the following is not part of the daily status meeting:

- a. What the team did today and how daily actions support workshop targets
- b. Current and accurate target charts
- c. Plan of action for tomorrow and how that supports workshop targets
- d. Updated Kaizen newspaper
- e. None of the above

3. TAKT time for the final report is 30 minutes per team:

True False

4. Presenting the actual results of the workshop week is the purpose of the final report, as well as:

- a. Recognize the team leaders and team members for the good work they did.
- b. Get a commitment from management that the improvements will be implemented.
- c. Define the action plan required to close out Kaizen newspaper items that were not completed during the week.
- d. All of the above

5. If time permits, all team members should participate in the final report out:

True False

6. The standard work combination sheet is the first sheet shown at the final report out:

True False

7. Which is not presented during the final report out:

- a. The SWOT analysis
- b. Takt Time Sheet
- c. Percent Load
- d. RPIW Target Sheet

8. Questions of understanding from the audience are the only ones permitted during the final report out. No other questions are allowed:

True False



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9. The completed target chart is shown:

- a. At the beginning of the final report out, right after the agenda
- b. At the end of the report out, after the newspaper
- c. Both of the above
- d. Only during follow-up meetings

10. Prior to the final report which of the following must be completed:

- a. Project plan detailing future RPIWs in the same area
- b. Gift giving to the KPO support staff
- c. Rehearsal to ensure takt time is met
- d. All of the above

Module Quiz

The House, Module 20

1. **Which of the following is not one of the three philosophies of the Global Production System:**
 - a. Cost reduction through the elimination of muda
 - b. Just-in-Time
 - c. Jidoka
 - d. Standard work

2. **Just-in-Time reduces and reveals inconsistencies through visual management and level production:**

True False

3. **The last step to assure and improve product and process quality is to:**
 - a. Reset the cycle
 - b. Separate machine work from human work
 - c. Install countermeasures
 - d. Detect abnormalities

4. **Jidoka improves productivity by:**
 - a. Reducing and eliminating rework
 - b. Eliminating the need to watch machines
 - c. Freeing peoples' time for value-added work
 - d. All of the above

5. **The resources of production are people, materials, and machines:**

True False

6. **Standard work is the method that balances peoples' work to their cycle time:**

True False

7. **By which type of maintenance is operational availability achieved:**
 - a. Breakdown maintenance
 - b. Preventive maintenance
 - c. Predictive maintenance
 - d. All of the above



Module Quiz

- 8. Which pairing below enables pull production:**
- a. Kanban and andon
 - b. One piece flow and reliable equipment
 - c. People and standard work
 - d. SWIP and WIP
- 9. When standard work is in place, which type of time becomes the management tool for detecting abnormal conditions and defining improvement objectives:**
- a. Takt time
 - b. Lead time
 - c. Cycle time
 - d. Employee time
- 10. Once all the pieces are in place, the organization is set to have met its objective:**
- True False

Module Quiz

7 Flows of Medicine, Module 22

1. Which of the following is a crucial measure of the seven flows in your organization
 - a. Lead time
 - b. Value Added time
 - c. Takt Time
 - d. Cycle time

2. Whenever possible, use:
 - a. Small equipment
 - b. Home-made, economical equipment
 - c. Right-sized equipment
 - d. All of the above

3. Good information flow ensures:
 - a. A reliable IT system
 - b. Enhanced safety in the care of the patients
 - c. Medications are delivered on time
 - d. Better inventory control of supplies

4. Medications are exempt from the Just-In-Time concept as their use is too variable and unpredictable:

True	False
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5. Muri is defined as unreasonableness:

True	False
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6. “Where can you scan to see what is happening next?” is a question to ask when considering:
 - a. Medication flow
 - b. Supply flow
 - c. Process engineering flow
 - d. Information flow

7. Information must facilitate a push process:

True	False
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- 8. What describes how information flows through the system:**
- a. The patient
 - b. The IT department
 - c. Spaghetti diagram
 - d. Value stream map
- 9. The flow of process engineering incorporates which of the other flows:**
- a. Patient flow
 - a. Supply flow
 - b. All flows
 - c. Equipment flow
- 10. Takt time and quality must be met on the floor for how many weeks in order to have the new process be engrained into the routine:**
- a. One week
 - b. Two weeks
 - c. Three weeks
 - d. Six weeks