

## **ED PIP: Diagnostic Phase**

Tools: Time Observation Studies

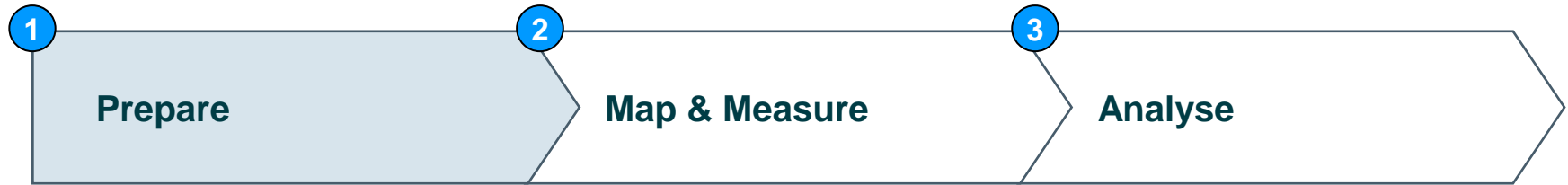
# Time Observation Studies – Overview

<b>Outcome</b>	<ul style="list-style-type: none"> <li>■ The real process of how work is done and how long it takes are known</li> </ul>
<b>Definition: 'What is it?'</b>	<ul style="list-style-type: none"> <li>■ A tool which provides structure to going to the place of work and seeing what is actually happening (refer to 'Go and See' guide)</li> </ul>
<b>Objectives: 'What is it used for?'</b>	<ul style="list-style-type: none"> <li>■ Time Observation Studies           <ul style="list-style-type: none"> <li>– Allow the improvement team to identify and quantify non-value added steps in a process</li> <li>– To identify how the works is done (not how the work should be done)</li> <li>– Quantifies variability of the time it takes to complete a process</li> </ul> </li> </ul>
<b>Benefits:</b>	<ul style="list-style-type: none"> <li>■ Used in conjunction with a Go and See approach to process improvement</li> <li>■ Helps to better understand the impact of non-value adding activities in a process</li> </ul>
<b>When to use</b>	<ul style="list-style-type: none"> <li>■ When the team has identified a key process that would benefit from greater understanding about its activities and from the creation of standard work</li> <li>■ When the improvement team disagree about the cycle time or actual activities of a key process</li> </ul>

## *Tip for integrating Lean principles into healthcare:*

- *Part of successfully implementing Lean in healthcare is adopting common language that may have originated in manufacturing and internalizing how it is used in a healthcare environment*
- *Time Observation Studies are the recording of how long it takes to complete a given step that is part of a process*

# Time Observation Studies - Instructions For Use (1/3)

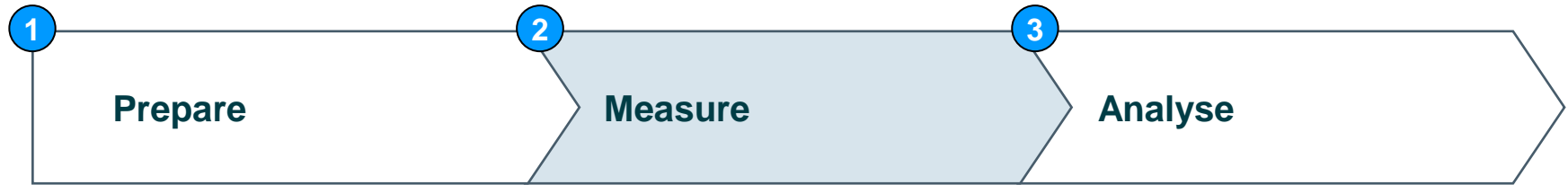


1. Observe the area and flow of work to generate a basic understanding of what is being measured
2. Explain to the member of staff who you are observing, make sure they understand the objective of the time study
3. Ideally, time observations are best completed by two individuals so that one person can monitor the watch and the other record the times



- It is critically important that the staff you are observing understand that you are NOT measuring their performance, just how long the process actually takes. Staff should not try to work faster than normal to improve their 'performance'
- Both the observers and individuals performing the task will benefit from watching the individual work before beginning timing. This should minimize the impact of staff performing the process differently during the time motion study

# Time Observation Studies - Instructions For Use (2/3)

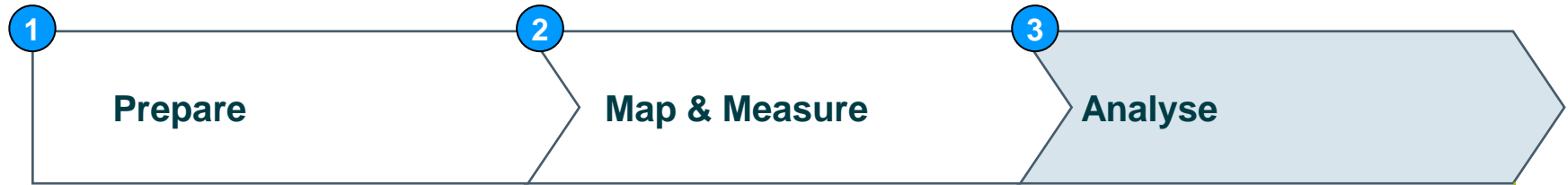


1. Write down the steps that are required to complete one cycle
2. Confirm with the member of staff when and how variability enters the process. This will help the improvement team decide when to best complete the observations. This may include times at the beginning of the shift, over lunch or on weekends
3. If the process is highly variable, the observers should schedule time with the staff to discuss how often the 'exception' occurs. Make sure to document sources of variability
4. The time motion study should be completed across all shifts and involve all individuals who are responsible for completing most of the volume of activity (Generally, 20% of the staff will complete 80% of the cycles)
5. Make sure the points when you are going to read the watch are clearly defined and understood by both members of the observation team
6. Make sure the team record at least 6-8 cycles, but 10-12 are preferred



- Often, in healthcare, the process is inherently variable so the observers need to make it clear that you are looking to monitor the 'normal' process, e.g. the process that is used for about 80% of the customers. It is often helpful to make it clear that during the time observation any 'deviations' from normal will be recorded
- Remember: This is not an assessment of an individual's performance!! Try to observe average performers of a task- not the most or least experienced members of staff
- All abnormal events must be recorded on the time observation sheet. These are often used to identify sources of unnecessary variability in the process that can be eliminated
- See the 'Go and See Guide' in this section for further information in process observation

# Time Observation Studies - Instructions For Use (3/3)



1. Always save your time observation sheets so members of the improvement team can review the data after the measurement process
2. The observers should select the lowest repeatable time for each step in the process. If, however, there are no repeatable times, then the improvement team should select the second lowest time
3. Review the time observation sheet to identify the lowest repeatable cycle time and reconcile this with the summary of the lowest repeatable step times
4. Look for sources of non-value added time to eliminate or identify causes of variability with a root cause analysis
5. Separate value-added and non-value added tasks on the form



- Once the time observation study has been completed, the team can use other tools, such as root cause analysis and pareto charts to create a plan to implement countermeasures to the issues identified
- Remember, the improvement team is looking for variability in the process. Sources of variability can be determined through the time observation study or through direct conversations with staff

# Time Observation Sheet

In the shaded space, write down the time as it appears on your watch

In white space, calculate the total time lapsed by subtracting from the previous step

Teams should observe at least 6-8 cycles, however 10-12 is preferred

Important!! Note abnormal events

## Time Observation Worksheet

<b>Process:</b> <i>Providing a mobility aid</i>						<b>Observer(s):</b> <i>Dylan and Go</i>						<b>Date:</b> <i>March 23/2009</i>			
Step#	Work Description	1	2	3	4	5	6	7	8	9	10	11	12	Task Time	Remarks
1	<i>Complete mobility assessment</i>	30:00	26:20	27:45	...										<i>This step is value added</i>
		30:00	26:20	27:45	...										
2	<i>Walk to equipment closet</i>	36:30	32:50	43:45	...										<i>In trial #3, the unit was a long way away from the equipment closet</i>
		6:30	6:30	16:00	...										
3	<i>Select appropriate mobility aid</i>	38:10	55:50	45:25	...										<i>In trial #2, the PT had to look on other units. Equipment was in hallway</i>
		1:40	23:00	1:40	...										
4	<i>Check condition of mobility aide</i>	41:15	57:35	47:10	...										
		3:05	1:45	1:45	...										
<b>Time for 1 Cycle</b>		41:15	57:35	47:10											<b>Lowest Repeatable Cycle Time</b>

This time will be the total time that appears on your watch or the sum of all separate steps (in white boxes)

Choose the lowest repeatable time for each step of the process

Add the lowest repeatable times up to create the cycle time

