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| **Element** | **Definition** | **Things To Keep in Mind** |
| **The Purpose** | Define the problem and why it is important. | * Avoid suggesting causes in the purpose statement. Cause determination will come later after the data have been analyzed. * Speculating about the cause of a problem before a thorough analysis and team discussion can result in the pursuit of a solution that is headed in the wrong direction. |
| **The Goal** | Collect baseline data and set an improvement goal after the problem has been fully diagnosed. | * The goal should be SMART:   + **S**pecific   + **M**easurable   + **A**ttainable   + **R**elevant   + **T**imebound * Benchmarks can be helpful in setting a goal, but are not always available for what needs to be measured. * If benchmarks are not available, comparing to baseline performance is an acceptable substitute for benchmarking. |
| **Description of Data** | Determine a process for collecting information to highlight a specific issue.   * Describe what to measure and how to use the data. * Identify the person who will collect the data. * Determine the length of time needed to collect the data. | Consider these factors when collecting  baseline data:   * Use neutral observers when possible in lieu of staff actively working a case. * The collection period should be sufficiently long enough to generate a meaningful sample of data while short enough to not be burdensome for staff to collect. |

Study Elements

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| **Data Analysis** | Describe the analysis and summarize the actual data using averages, ranges, or percentages.  Include—   * Frequency: How often the issue occurred in your study period * Sources: Potential reasons for your issues | * Help others understand the data through tables or charts. * Share the information with the team. |
| **Data Comparison** | Compare the performance goal with the current observed performance to determine whether the goal was met. | Consider using the **3 A’s** to decide what to  do next:   * **A**dopt – The goal was reached. Continue to expand testing. * **A**dapt – The goal was not met, but there was improvement. Consider additional testing or make adjustments to the intervention to achieve greater change. * **A**bandon – No improvement or a decrease in performance was observed. Consider testing a new intervention. |
| **Cause of the Problem** | If the goal was not met, discuss reasons why it was not met. | * Brainstorm with your team the possible causes of the problem. * Select the cause(s) you have the most control over to be the focus of your initial intervention. |

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| **Corrective Actions/**  **Interventions** | Determine a corrective action plan to meet the goal. | * Keep the intervention as simple as possible to avoid confusion and change overload for the team. * Start small (as small as one case or one surgeon). * Keep the period long enough to gather meaningful data to assess whether the intervention is working, but short enough to allow rapid evaluation. * Do not continue with an obviously unsuccessful intervention just for the sake of adherence to the plan. |
| **Change Data** | Compare the baseline data with the data collected after the intervention was initiated. | Once again, consider using the **3 A’s** to  decide what to do next:   * **A**dopt – The goal was reached. Continue to expand testing. * **A**dapt – The goal was not met, but there was improvement. Consider additional testing or make adjustments to the intervention to achieve greater change. * **A**bandon – No improvement or a decrease in performance was observed. Consider testing a new intervention. |
| **Additional Corrective**  **Actions or**  **Remeasurements** | Use the data collection process described earlier. Use the new data to perform the analyses again and determine a new corrective action/intervention. | * This cycle of testing interventions should continue until the desired results are achieved. * It could take several cycles before this happens. |
| **Data Comparison** | Compare the performance goal with the current observed performance to determine whether the goal was met. | * Reflect on the testing of any intervention with the team to provide an opportunity to discuss what went well, what didn’t go well, and what could be improved. |

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| **Element** | **Definition** | **Things To Keep in Mind** |
| **Conclusions** | Describe whether or not the goal was reached. | * Conclusions are typically presented in narrative form and should be directly related to your change data. * Include any obstacles encountered along the way. |
| **Communication/**  **Reporting of Findings** | Schedule a time to share all of the data collected, how it was measured, what intervention was used, and if the desired goal was met. | * It is extremely important to keep leadership informed of progress to help build support for quality improvement efforts. Leaders are in the best position to remove barriers to success, so it’s important to share struggles and successes. * Keep staff informed of progress along the way to keep them engaged in the work. |