2017 Performance Improvement Report

STRATEGIC PRIORITY

2. Increase capacity and patient access

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| **Project Name** | | | |
| Improve the Turnaround Time (TAT) of Direct Molecular testing for Mycobacterium tuberculosis Complex from Extra pulmonary Samples. | | | |
| **Site** | | **Department** | |
| Jeddah | | Pathology and Laboratory Medicine | |
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| **Project Status** | **Project Start Date** | | **Project End Date** |
| Completed | 04-01-2017 | | 07-30-2017 |

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| **Problem:** Why the project was needed?  The test methodology was Deoxyribonucleic acid (DNA), amplification performed on Probetec instrument giving no opportunity of improving TAT.  Probetec assay utilized multiple reagents with short shelf life and there were challenges to obtain reagents on time from supplier. | **Aims:** What will the project achieve?  1. Improve the monthly 90th percentile Turnaround Time (TAT) from 149 to 75 hours (by 50%).  2. Reduce hands on time for running the test from 6 to 3 hours (by 50%). |
| **Benefits/Impact:** What is the improvement outcome?  *(check all that apply)*  Contained or reduced costs  Improved productivity  Improved work process  Improved cycle time  Increased customer satisfaction  Other (please explain)  Click or tap here to enter text. | **Quality Domain:** Which of the domains of healthcare quality does this project support?  *(Select only one)*  **Timely** |

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| |  |  | | --- | --- | | **Measures:** Performance metrics to be evaluated | **Targets:** Expected outcomes | | Turnaround Time (TAT) of Direct Molecular testing for Mycobacterium tuberculosis Complex. | 1. Improve the monthly 90th percentile Turnaround Time (TAT) from 149 to 75 hours (by 50%).  2. Reduce hands on time for running the test from 6 to 3 hours (by 50%). | |
| **Interventions:** Overview of key steps/work completed   * Evaluated recent methodologies that offer results within lesser time. * The new methodology Novel Rapid Polymerized Chain Reaction (PCR) performed on Genexpert instrument was selected and validated with extra –pulmonary samples. * The newly adopted method is with less hand on time, minimal manual preparations and test run time is 3 hrs. * The Genexpert machine was already available in the lab and only the reagent (Mycobacterium Tuberculosis Complex/ Rifampin Resistance (MTB/RIF) cartridges was requested. * The reagent is a self-contained cartridge with all reagents on board and usually with long shelf life. * Internal policies and procedures were developed (DPLM-J-MA–07-037) and staff trained on performing the test. * A memo was issued stating availability of the test and reportable ranges with interpretations for this assay. (LAB-J/196/38) |
| **Results:** Insert relevant graphs and charts to illustrate improvement pre and post project  *(insert relevant graphs, data, charts, etc.)*  1. Reduced the 90th percentile of TAT from 149 hours (April 2016) to 48 hours (April 2017) (68% improvement which exceeded the target goal).  2. Reduced hands on time from 6 hrs. To 3 hrs. (50% improvement). |

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| **Project Lead** | **Team Members** |
| **Name**  *(person accountable for project)* | **Names**  *(persons involved in project)* |
| Dr. Mohammed Qutub | Anupama Vattappillil  Prasanth Govindan  Sarfinaz Hanbazaza  Ibrahim Qoulaghasi |