Performance and Clinical Excellence (PaCE) project is the performance evaluation project for all Ministry of Health and Prevention (MoHaP) hospitals. The main scope of PaCE was to have a program, which can deliver accurate, timely, clinical, administrative, and operational data, helps in monitoring and evaluating the delivery of health care at MoHaP Hospitals in an efficient manner. Late 2016 a new chapter was opened by developing PaCE (Performance and Clinical Excellence Program) Dashboard, Data-warehouse and Business Intelligence project as a main health data collection, and reporting tool, which can now easily view comprehensive interactive dashboards, and thematic health maps that bring the data to life.

In January 2017, we decided to go a step further using the ability to leverage real-time transactions, by adding real-time HL7 feeds to the existing system and developed six new dashboards displaying real-time information from all hospitals in all major areas.

In early 2018 PaCE team started focusing on meaningful use, clinical outcome KPIs and the growing need for clinical analytics in combinations with operation improvement. The idea was to incorporate patient and physician information in the existing system and use as Command centers that bring together patient-flow decision-makers and equip them with data and analytics that help them prepare for surges and avoid delays in care.

PaCE – Performance Dashboards

PaCE – Real Time Dashboards

The Ministry introduced an electronic health system (Cerner Millennium®) into 17 of its hospitals as a component of its electronic patient record project, “Wareed”. Once Wareed was in place an opportunity existed to explore the proposition that data extracted from the health information system could be used to measure performance indicators in late 2012. In January 2016 we developed PaCE’s own EDW along with monthly dashboards and business intelligence tool based on SAP Intelligence System for which data was pulled from Cerner (HIS system).

After implementation, PaCE Dashboards provided a fuller monthly picture to MoHaP management of what is happening in all hospital in A&E, inpatient, Outpatient and Nursing areas. The dashboards displayed data with easy access to live data and previous month’s data highlighting the monthly KPIs along with target and overall MoHaP average. It helped us in sharing information efficiently and effectively with people across the organization, measuring hospitals’ performance in a transparent manner along with monitoring, and managing strategic initiatives.

As the project revolved around KPIs, we have encountered several areas of improvement which include:

- Patient waiting time in Outpatient clinics across all MOHAP hospitals, earlier from a mean of 49 minutes per month for all MoHaP hospitals to current figure of 22 minutes for catering 65000 patients per month.
- Reduction of waiting time in Emergency department, earlier 92% of all patients was discharged within 4 hours and currently its 96%. In addition, it also helped in reducing time for Triage level 1-3 more compared to cold cases.
- 15% improvement in Bed occupancy and bed utilization, as Hospital management has access to monthly and real time information to make changes for improvement.
- 18% reduction in LAMA (left without being seen) patients, for this data was studied for category eventually improving the patient satisfaction in MoHaP facilities.
- Improvement in transferring patients across hospitals as all hospitals has access to live bed information for whole MOHAP.
- Did not Attend rate in Outpatient clinics went down by 28% in Q2 2017 over Q2 2016, by using data from each specialty clinic and moving resources across different clinics.

Conclusions

PaCE Dashboards provides a fuller picture to MCHAP management and hospital management of what is happening on monthly basis and in real time in all hospitals in very innovative manner with main deliverables concentrating on Sharing information efficiently and effectively with people across the organization, measuring hospitals’ real performance and efficiency in a transparent manner, monitoring, and managing strategic planning initiatives in a “real time” environment with accurate and current data.