

**TEAM:**

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## Background

- The quality and efficiency of healthcare delivery are key drivers that influence hospital quality as well as patient satisfaction (Atnafu, Haile Mariam, Wong, Awoke, & Wondimeneh, 2015).
- The degree to which health customers are pleased with the care they receive is strongly linked to the quality of the waiting experience (Preyde, Crawford, & Mullins, 2012). Healthcare organizations that aim to deliver outstanding services must manage their waiting times effectively.
- The patient waiting time is the period of time that passes between patients first seeking medical treatment from the healthcare system and their admittance for consultation and diagnosis. The hand surgery clinic at Rumailah Hospital (RH) in Qatar has seen that 88% of new patients who had been referred for urgent treatment from the Accident and Emergency department (A&E) are waiting more than 14 days to get an appointment. This was despite the referral process policy across Hamad Medical Corporation, which stated that urgent referrals must have been addressed within 14 days.

## Aim Statement

- To increase the percentage of patients with new, urgent referrals to the hand surgery clinic at Rumailah Hospital from the Accident and Emergency department to be seen within 14 days from the current 12% to 20% by the end of October 2019 and from 20% to 60% by end of April 2020.

## Performance Measures

- Outcome Measure**  
The percentage of patients who get new urgent appointment within 14 days of referrals at RH-hand surgery clinic.
- Process Measure**  
Third Next Available appointment  
-The Number of new patients seen in the RH Hand Surgery Clinic after the addition of new appointment slots (Increase Capacity)  
-The percentage of triaged referrals.
- Balance Measures**  
Number of Patient seen for follow up appointment in RH Hand surgery clinic.

## Methods

- This is a Quality Improvement Project used the Institute for Healthcare Improvement model for improvement, the team used Process map ( Fig1 ) and the root cause analysis ( Fig 2 ) to identify the bottleneck in the process, the Plan- Do - Study - Act ( PDSA ) cycles facilitates testing the selected change Ideas ( Fig 4 ) : increase capacity, triage Accident and Emergency referrals, and clear the backlog .
- Population :** The scope of this QI project included all new patients over the age of 14 years that had been urgently referred for hand surgery in 2019. HMC defines urgent referrals as those in which an appointment is required within 14 days. A driver diagram developed to display the team's theory on what would drive, or contribute to, the success of the project. The driver diagram ( Fig3 ) includes:
  - The primary drivers,
  - The secondary drivers,
  - The change ideas

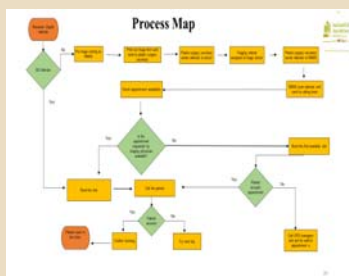


Fig 1: Process Map

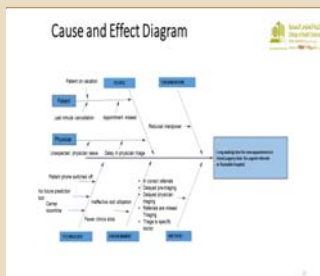


Fig 2: Cause and Effect Diagram

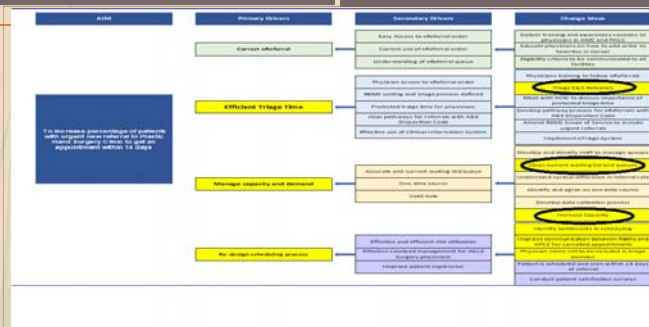


Fig 3: Driver Diagram



Fig 4: PDSA Cycle Ramps

Fig 5: A&E Referrals triaged by Physicians (Process Measure)

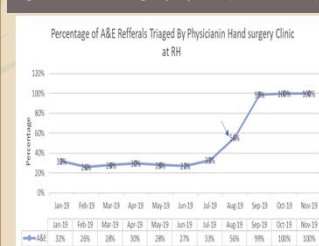


Fig 6: Urgent Referrals ( Process Measure )

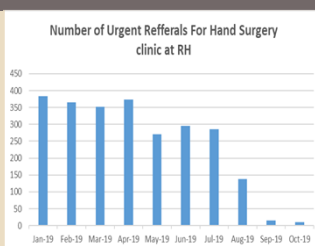


Fig 7: Third Next Available appointment (Process Measure)

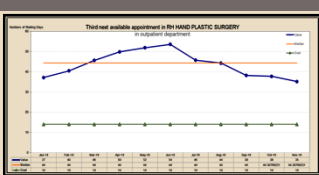


Fig 8: No. of New Patients after adding Capacity (Process Measure)

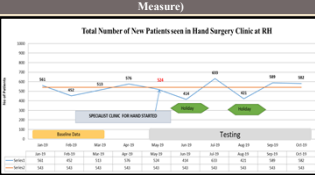


Fig 9: Percentage of patients with an appointments within 14 days(Outcome Measure)

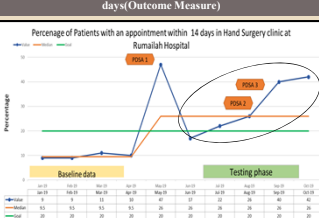
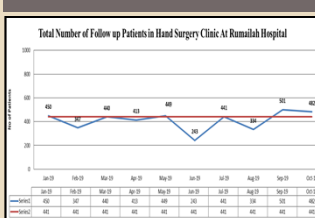


Fig 10: No. of Follow Up Patients (Balance Measure)



## Results

- Fig. 4 Shows that the team succeed to reach 100% compliance of triaging referrals from A&E, the result started to be seen in September and continued in October,
- All referrals made from the A&E department were referred as urgent. However, triaging physicians who specialised in hand surgery made the clinical decision that 95 % of these referrals were not urgent ( Fig. 6).
- Fig. 7 shows the TNAA for surgeons in hand surgery clinics. The availability of the TNAA decreased from 2019 to 2018 and this data did not show significant improvement. More data points are required to track this process measure.
- The average number of patients seen in the clinic per month increased from 505 between January and March 2019 to 582 in October 2019 ( Fig 8 ). The number of patients seen in June and August were 414 and 421, respectively. This dip was due to Eid vacations. More reductions in the number of patients on the waiting list in the next few months is expected.
- Increase was observed in the proportion of patients who received appointments within 14 days of the referral, from 22% in July to 26% in August and 40% in September. This trend continued in October. ( Fig 9 ).
- The increase in the capacity for new patients did not affect the number of slots for follow-up patients, as shown (Fig 10 ). The functioning of this other part of the system was maintained without negative effect while the QI project was implemented.

## Conclusions

The project team did extensive research in understanding the complex process of appointment scheduling that causes long waiting times. The project team tested three change ideas that yielded the desired results of increasing the percentage of new urgent patients seen within 14 days of referral from 12 % - 40 %.

The team is planning to test the next change idea to improve the triaging process by implementing electronic triaging, which is expected to reduce the waiting time for an appointment in the clinic.

Our primary outcome did not exhibit sustainability; more work is still ongoing to achieve this as we need to have >10 data points to meet the designated outcome. Given the favourable results, the next step would be to sustain the outcome and then to spread the work to similar clinics.

## Sustainability & Future Plan

- Continuous monitoring of waiting time by the team and identify causes and troubleshoot for, and deviations may happen.
- Quarterly report with detailed analysis of waiting times, no show and waiting list would be tabulated and printed for the quality department in RH and to the head of plastic surgery department.
- The implementation of the E-triaging.
- Open access scheduling of appointments on the same day.
- A real-time patient tracking system that can facilitate efficient patient flow.
- Conducting a patient experience survey after the introduction of changes can be considered in the future.

## ACKNOWLEDGMENT

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- Dr. Amal Abousaad, Assistant Executive Director of Quality and Patient Safety, RH
- Project team