EVALUATING QUEUE MANAGEMENT SYSTEM IMPACT ON PATIENT FLOW AND SATISFACTION

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About the Organization

- Global Health Limited (Medanta), a multi-specialty hospital which is situated in Gurgaon, Haryana, India. Dr. Naresh Trehan, a prominent cardiovascular and cardiothoracic surgeon, created it in 2009.
- The hospital has a bed capacity of 1,250 people and is situated on 43 acres.
- One of India's biggest and most technologically advanced hospitals, it provides a wide range of medical treatments, such as cardiology, cancer, neurology, orthopedics, and urology.
- Additionally, the hospital has received accreditation from JCI (Joint Commission International) and NABH (National Accreditation Board for Hospitals & Healthcare Providers).
- Vision: To be the leading provider of healthcare in India.
- Mission: To provide world-class healthcare services that are affordable and accessible to all.

Introduction

OPD is regarded as the front door to hospital services, and it is here that a patient gets their first impression of the hospital.

Patient happiness and flow are crucial elements that have a big impact on how well treatment is delivered overall in healthcare settings.

Effective patient flow, which ensures fast access to services and lowers waiting times, leads to improved patient outcomes and experiences.

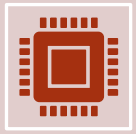
Patient satisfaction, on the other hand, represents how well healthcare procedures work and how well patients' demands and expectations are met.

A positive overall experience improves the brand, the organization's reputation, and client loyalty.

While the MSK and orthopedics OPD, which provides specialized therapy for illnesses affecting the bones, joints, and muscles, can be particularly challenging to manage patient flow at.

First-come, first-served policies have historically been in place in healthcare facilities, which frequently results in lengthy wait times and long queues.

Also, it made unnecessary travels to other touchpoints inside the OPD exacerbate the problem and waste time for both patients and medical staff.



Implementing QMS as a remedy for these issues, which includes features like computerized queue displays and streamlined patient routing to the appropriate locations inside the institution.

Study Objectives

1. To assess wait times between before and after the QMS was installed for various patient journey phases.
2. To determine the level of patient satisfaction with the QMS.
3. To evaluate the QMS's effectiveness at handling problems like excessively long lines, extended wait times, and needless transfers between touchpoints.
4. Identifying areas for improvement and making suggestions.

Methodology

- Sampling Technique: Convenience Sampling.
- Sample Size:

Time-motion analysis: 80 patients (Pre and Post QMS implementation)

Questionnaire survey: Same 80 patients were included in the after the implementation.

- Study Population: Patients coming to the Orthopedics OPD for the consultation.

Inclusion Criteria:

- Patients who visited the OPD during the period.

Exclusion Criteria:

- Patients only coming for follow-up, dressing and emergency cases.

Methodology

Data Collection Procedure:

- Time-motion analysis: It was used to calculate the length of various patient journey phases, such as billing, nursing evaluation, and consultation. The TMS data will be collected for both pre-QMS and post-QMS implementation periods. Randomly total 80 patients (Pre and Post implementation) were observed as a sample.

- Questionnaire Survey: A questionnaire survey was used to gather input from patients regarding their experiences and levels of satisfaction. Using both online and offline modes, the responses were collected in person. Same 80 patients' responses were observed as a sample.

Time Motion Analysis

(Checklist)

- Cash/ Panel patients
- Started Time (~Stopwatch)
- Billing wait & time (in mins): time spent on the billing procedure as well as the wait time for patients at the billing counter.
- Nursing assessment wait & time (in mins): calculating the amount of time needed for the nursing assessment and the wait time for patients.
- Consultation waits & time (in mins): the duration of the consultation and the time spent waiting for a turn to see the doctor.
- Doctor name
- Total Waiting Time (in mins)

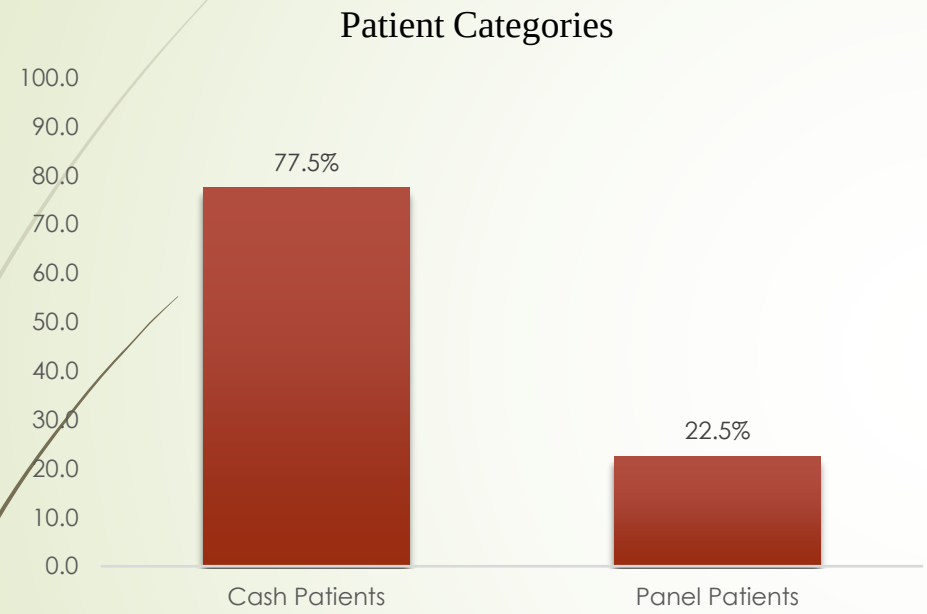
Questionnaire

- Overview of the questionnaire survey conducted to assess patient satisfaction and experience on the floor.
- It focuses on 10 questions (exclusion of private details).
- Key aspects assessed in the questionnaire:
  - Billing experience
  - QMS experience
  - Nursing experience
  - Overall satisfaction with the OPD services
- One open end question regarding suggestions.
- The patient's name, contact number, UHID or consultant name were kept anonymous.
- The data is confidential and used only for the study purpose

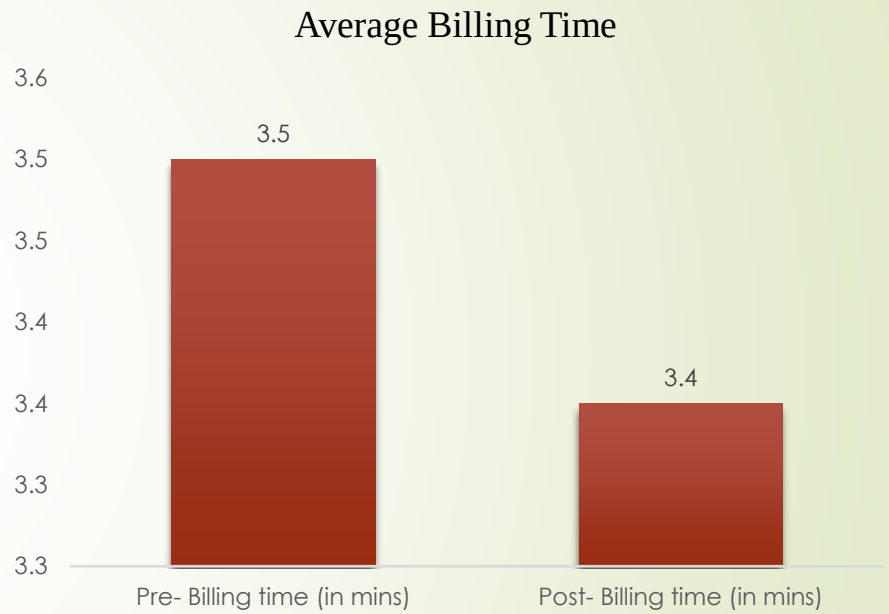
Results

- Data was exported to MS Excel for analysis purpose.
- On this floor, nine doctors are scheduled for OPD.
- 38% of patients are female, with the remaining patients being men.
- Around 46.5% of people had appointments, while the other 53.5% were walk- ins.

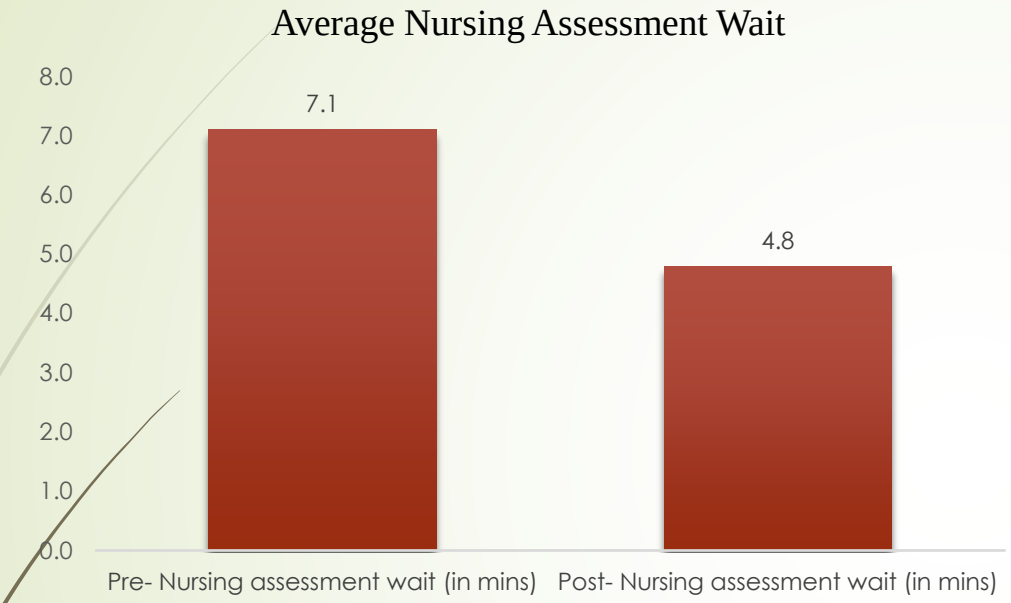
Time Motion Analysis

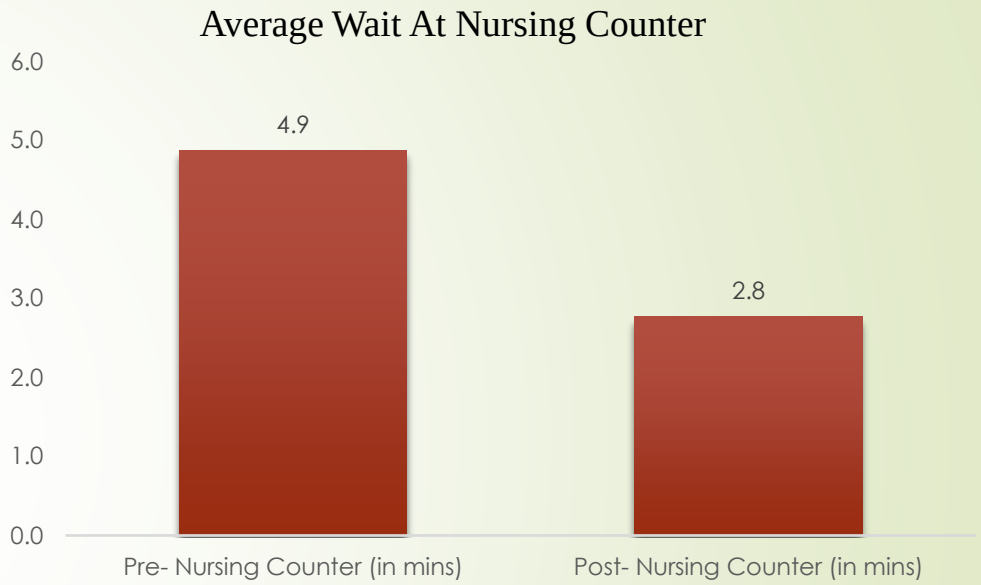


77.5% of the patients were cash patients and the remaining 22.5% belonged to the panel group.



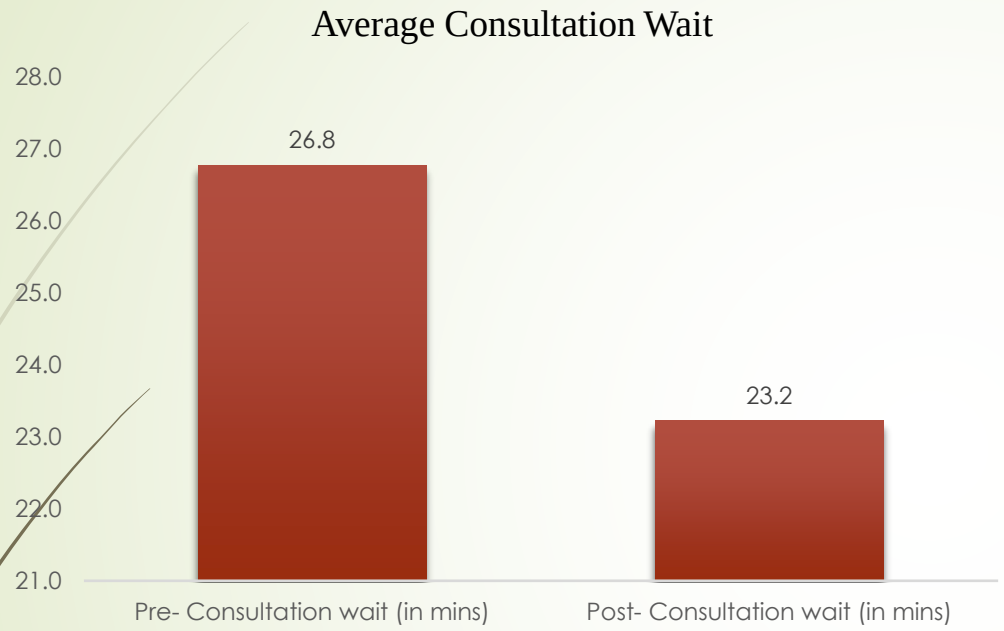
The avg. billing time was 3.5 minutes prior to the deployment of the QMS and 3.4 minutes following its implementation

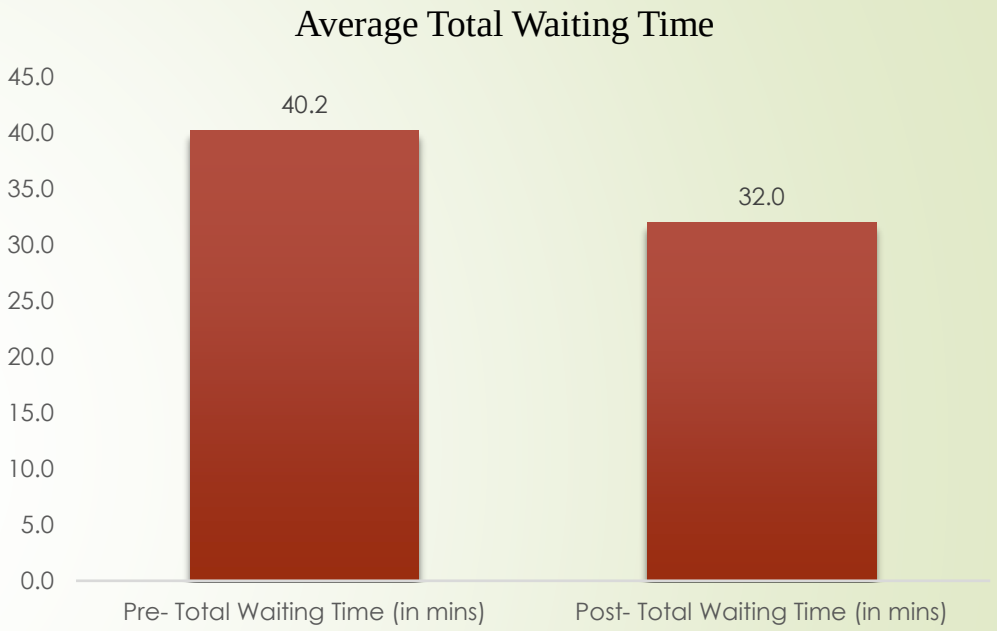




The avg. NAW was 7.1 minutes prior to the introduction of the QMS. However, upon implementation, the typical wait time for a nursing assessment dropped to 4.8 minutes.

The avg. wait time at the nursing counter was 4.9 minutes prior to the introduction of the QMS which dropped to 2.8 minutes on average.

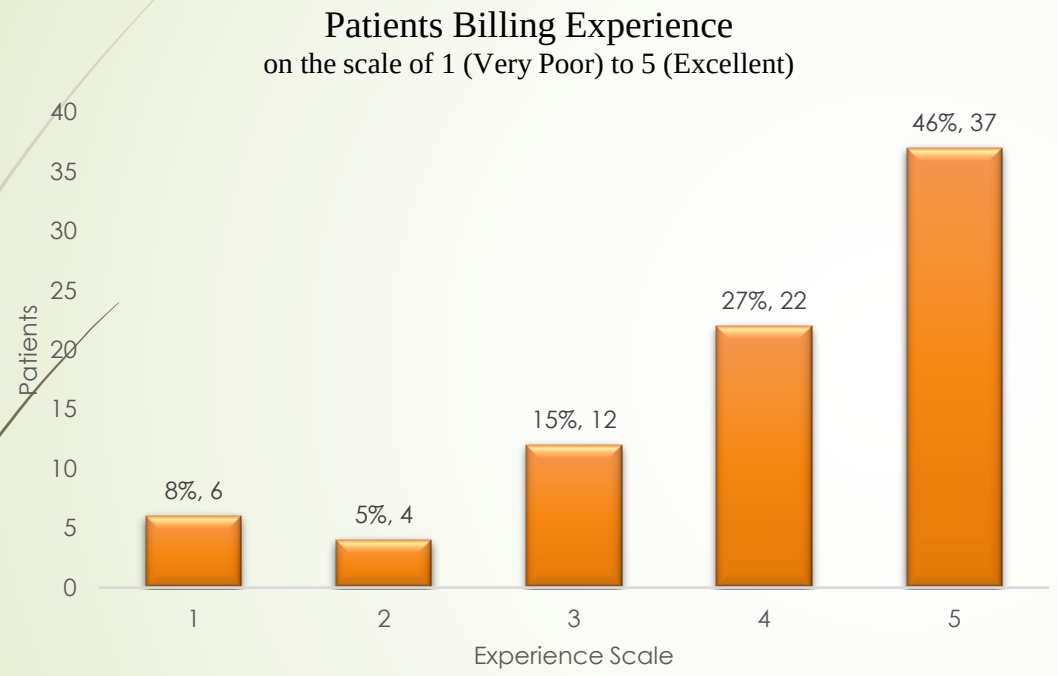




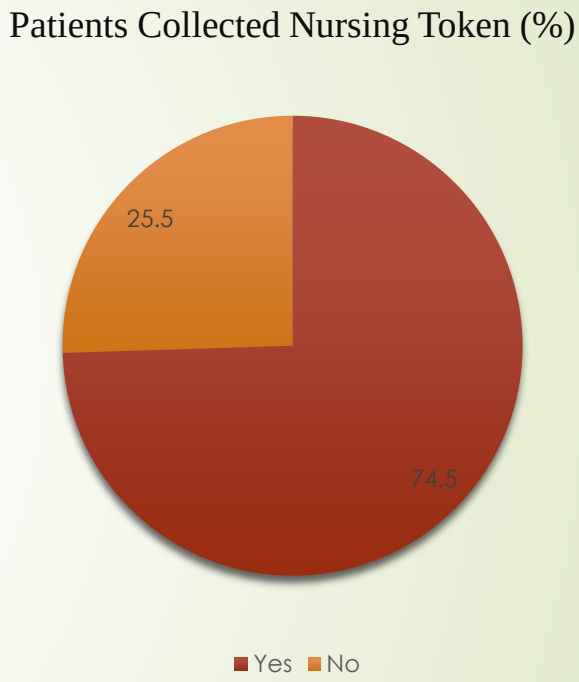
Average CW time was recorded to be 26.8 minutes prior to the introduction of the QMS which was reduced to 23.2

During January to February 2023, it was observed that average waiting time was 40.2 minutes which fell to 32.0 minutes after the deployment i.e., in the next two months.

Patient Satisfaction Assessment

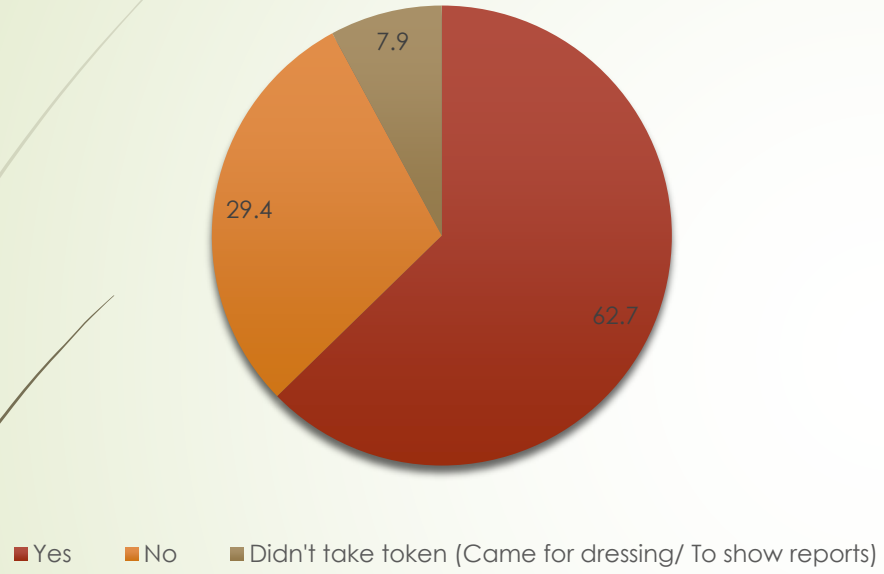


Roughly 73% of patients were very satisfied with the billing service. However, only about 13% of patients thought the billing service was unsatisfactory.



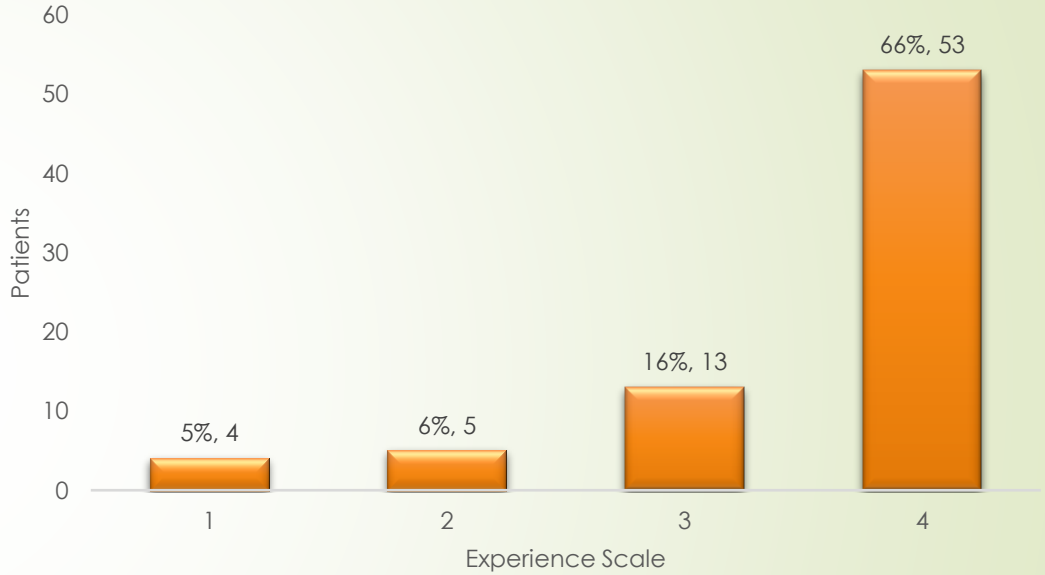
74.5% of patients took the nurse token, while the remaining proportion did not.

Patients Guiding by Billing Staff (%)



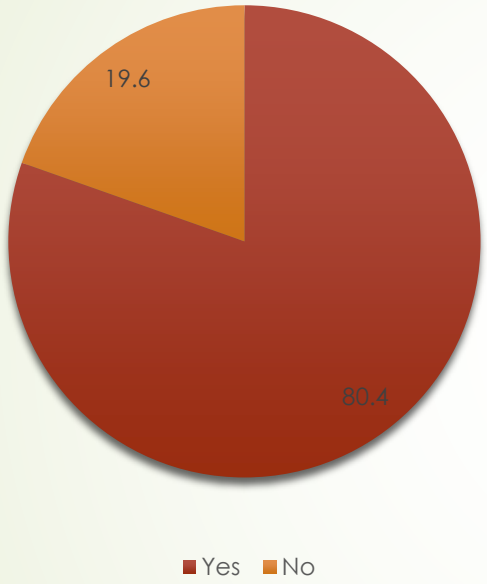
Billing staff advised about 63% of patients to pick up the nursing token at the OPD. However, about 29% of patients didn't receive assistance from the billing staff for the same.

Experience of Token System
on the scale of 1 (Very Bad) to 4 (Very Good)



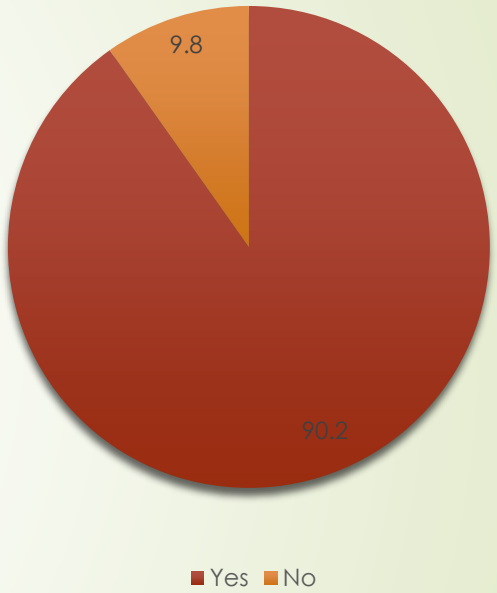
The token system that was adopted at the OPD was supported by about 84% of patients.

Guidance to Nursing Counter

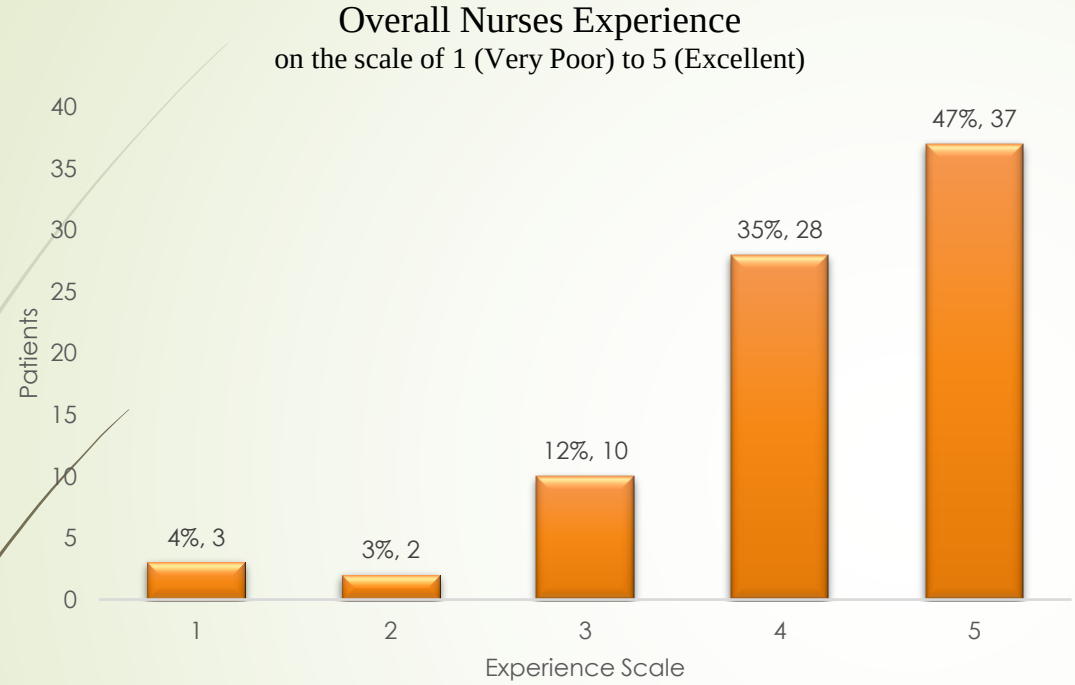


The nurse evaluation room directed about 80% of patients to the nursing counter.

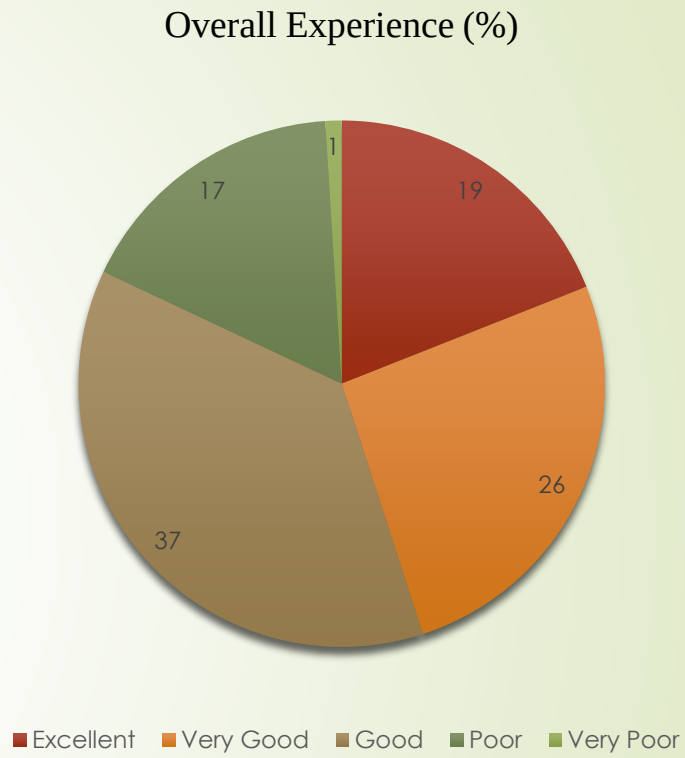
Guide and Address Patient Turn (%)



About 90% of patients received direction and attention from the nursing personnel when it was their turn for consultation.



Patient satisfaction with their total nursing experience was found to be at 82%.



About 45% of patients said they were extremely satisfied with their time on the floor in general. Additionally, 37% of patients said they were satisfied with their whole experience, while 18% said they were disappointed.

Conclusion

- Patient flow and satisfaction have improved as a result of the MSK and orthopedics OPD's deployment of a QMS for nursing assessment.
- Introducing a QMS- helped manage the queues, minimized patient movements, promoted trust and understanding.
- Though the billing procedure and CW times are two areas that could still be used for some work.
- The implementation of the token system made patient flow easier and guaranteed a better organized procedure for nursing assessments.
- Even patients expressed favorable opinions of the nursing staff, high levels of satisfaction, and a preference for the token system.
- The overall positive feedback from patients, emphasize the significance of excellent communication and patient-centered care in boosting the general patient experience.
- Improved the experience of patients who prefer digital technology for a hospital visit by prior preparation of required documents
- Better signage for the patients to self guide themselves throughout the consultation experience.

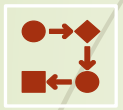
Suggestions

- Improve Billing Process: Even though most patients were satisfied with the billing service, 13% of them gave it a negative rating, it is crucial to address their issues. Consider taking steps to improve staff training, establish effective documentation protocols, and reduce errors and delays in the billing process. Also, for paneled patients maybe a different dedicated queue for improvement in billing wait time.

- Create a Separate Queue or allocated Counters for Patients with Pre-Booked Appointments: At the billing section, create a different queue or allocated counters for patients with pre-booked appointments. In addition to shortening wait times and assuring a better flow for both walk-in and scheduled appointment patients, this would assist these patients' billing procedures move along more quickly.

- Optimize Consultation Wait Time: Despite a minor decrease in CW times, more work needs to be done to significantly reduce patient wait times. This can entail putting appointment scheduling methods into place, making the most of doctors' available.

- Continuous Staff Training: Provide continual training to the nursing and billing staff to improve their patient management, effective communication, and customer service abilities. This will guarantee the delivery of high-quality care consistently, increase patient satisfaction, and foster a positive environment within the OPD.



- Establish a method for routinely tracking patient flow, wait times, and levels of satisfaction. Asking patients for input at random will help you find areas that need improvement and monitor how well adjustments you make are working. This feedback can assist in spotting any new problems and direct future adjustments to the OPD procedures.

Thank You