



SUMMER INTERNSHIP REPORT

At

NXT Designs

(April 22nd June to June 22nd June)

A report

By

Dr. Tanya Dua

PGDM (Hospital and Health Management)

2023-2025

International Institute of Health Management Research, New Delhi

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to everyone who contributed to my internship experience and supported me throughout this journey.

First and foremost, I am extremely grateful to **Mr. Puneet Sharma, CEO of QR Buddy**, for giving me the opportunity to intern under his esteemed guidance. His mentorship, invaluable insights, and constant encouragement have greatly enriched my learning experience. His leadership and expertise have been truly inspiring, and I am thankful for the knowledge and skills I have gained during my time at QR Buddy.

I am also deeply thankful to **Dr. Vinay Tripathi**, my mentor at the International Institute of Health Management Research. His continuous support, guidance, and constructive feedback have been instrumental in shaping my academic and professional development. His expertise and dedication have provided me with a strong foundation for my future career.

Additionally, I would like to extend my heartfelt thanks to the faculty and staff of the International Institute of Health Management Research, New Delhi for their unwavering support and for providing a conducive learning environment. Their commitment to excellence has significantly contributed to my growth and success.

Finally, I would like to thank my family and friends for their constant support and encouragement throughout this journey. Their belief in me has been a source of strength and motivation.

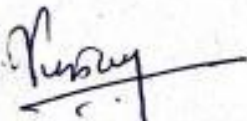
Thank you all for your invaluable contributions.

Sincerely

Dr. Tanya Dua

Certificate of Approval

The Summer Internship Project of titled **“Digital transformation in hospitals: QR Buddy as a tool for communication and operational excellence”** at **NXT Designs Pvt. Sol. Ltd.** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approve the report only for the purpose it is submitted.



Name of the Mentor
Designation IHMR, Delhi

FEEDBACK FORM
(IIHMR MENTOR)

Name of the Student: Tanya Pua

Summer Internship Institution: NXT Designs

Area of Summer Internship: Implementation of OR Buddy system in hospital settings

Attendance: Spent useful time in the organization

Objectives met: Objectives of summer internship are met

Deliverables: Student has submitted the report and made presentations

Strengths: Sincere and hard worker

Suggestions for Improvement:

—



Signature of the Officer-in-Charge
(Internship)

4/ July/2024
Date
Place

LETTER OF RECOMMENDATION



July25,2024

Certificate of Performance

This is to certify that **Ms Tanya Dua** has demonstrated good performance in their role at Nxt Design Solutions Pvt Ltd . His dedication, professionalism, and exceptional work ethic have significantly contributed to the success and growth of our organization.

Ms Tanya has consistently exhibited exceptional skills and achieved remarkable results in the following areas:

Operations Management :Tanya has demonstrated exemplary performance, such as exceptional leadership, teamwork, or people management skills.

Their commitment to excellence and ability to consistently surpass expectations have made a significant impact on the overall success of our team and company. They have not only exhibited exceptional technical skills but have also demonstrated exceptional interpersonal and communication skills, fostering positive relationships with colleagues, clients, and stakeholders.

She has consistently goes above and beyond the call of duty, displaying a strong sense of responsibility and initiative. They are a valuable asset to our organization, and their contributions have been invaluable.

In recognition of their performance, we hereby present this Certificate of Performance to Ms Tanya dua as a token of our appreciation for their exemplary dedication, hard work, and outstanding achievements.

Best Regards


Manisha J
Head HR

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We Work, Gurugram

puneet@nxtdesigns.com

FEEDBACK FORM

(Organization Supervisor)

Name of the Student: Dr. Tanya Dua

Summer Internship Institution: NXT Designs Pvt. Sol. Ltd.

Area of Summer Internship: Business operations management

Attendance: 43/45 days

Objectives met:

- Conducted comprehensive training sessions on QR Buddy for various hospital departments. Ensured all staff members were proficient in using the QR Buddy system effectively.
- Provided immediate technical assistance to resolve issues post-implementation. Ensured the system operated smoothly after going live, minimizing downtime

Deliverables:

- Developed and delivered training modules on the use of QR Buddy for various hospital departments.
- Supported the live deployment and ensured the seamless operation of the QR Buddy system.

Strengths:

- Demonstrated strong listening skills, effectively understanding and addressing the needs and concerns of hospital staff.
- Exhibited confidence in delivering training sessions and resolving technical issues, instilling trust in the system among users.
- Efficiently managed multiple tasks and responsibilities, ensuring all deliverables were met in a timely manner.
- Consistently on time for all meetings, training sessions, and support activities,

demonstrating reliability and dedication.

Suggestions for Improvement:

- Work on being slightly more commanding to ensure that team members and staff follow through on their tasks effectively.
- Develop a more discerning approach and avoid believing people too easily to ensure that you receive accurate and reliable information.

Signature of the Officer-in-Charge (Internship) – Mr. Puneet Sharma

Date- 22nd June, 2024

Place-

A circular stamp with the text "K.T. DESIGN SOLUTIONS PVT. LTD." around the top edge and "MOHALI" in the center. A handwritten signature "Puneet" is written over the stamp.

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Acronyms /Abbreviations

TAT	Turnaround Time
HK	Housekeeping
IT	Information technology
BLE	Bluetooth low energy
RFID	Radio frequency identification
GDA	General Duty Assistant
OT	Operation theatre

Observational learnings

Section 1: - Introduction

NXT Design Sol Pvt Ltd stands as a beacon of innovation in the realm of IT, specializing in the development of cutting-edge software tailored to meet the dynamic needs of modern organizations. Their client portfolio boasts a diverse array of esteemed institutions, including Marengo Asia Hospital in Faridabad and Gurgaon, CIMS in Ahmedabad, and Metro Hospital in Faridabad, among others. With a relentless commitment to excellence, NXT Design Sol Pvt Ltd harnesses the power of technology to simplify property management, streamline asset tracking, optimize workforce deployment, and refine inventory and checklist management processes. Through their software like QR Buddy, they aim to demonstrate the tangible benefits of technological integration in improving organizational performance and service delivery.

1.1 Vision

NXT Design Sol Pvt Ltd envisions a future where technological prowess converges with organizational excellence, fostering a dynamic landscape where efficiency thrives and innovation flourishes. At the heart of this vision lies the ambition to cultivate a tech-savvy workforce management team equipped with the tools and expertise to navigate the complexities of modern-day operations seamlessly.

1.2 Mission

The mission of NXT Design Sol Pvt Ltd is to develop and deliver state-of-the-art software solutions that address the unique challenges faced by various sectors. They are committed to understanding the specific needs of their clients and providing tailored solutions that improve operational efficiency, reduce turnaround times, and enhance communication. Through initiatives like QR Buddy, they aim to demonstrate the tangible benefits of technological integration in improving organizational performance and service delivery.

1.3 Objectives

The primary objective of their software QR Buddy is to revolutionize hospital management by enhancing service delivery, optimizing workforce and staff management, and increasing operational transparency. QR Buddy aims to improve efficiency by minimizing waste and streamlining processes, thereby ensuring timely and effective patient care. By facilitating efficient scheduling, task allocation, and inventory management, QR Buddy supports optimal resource utilization and staff productivity.

1.4 Values

QR Buddy prioritizes a user-centric design to make their tools accessible and intuitive for all healthcare workers. Upholding integrity and accountability, they commit to the highest standards of quality in every feature and service they provide. Their collaborative approach fosters teamwork within hospital staff, enhancing workflow and patient outcomes. Dedicated to sustainability, QR Buddy implements practices that support long-term operational efficiency and resource optimization.

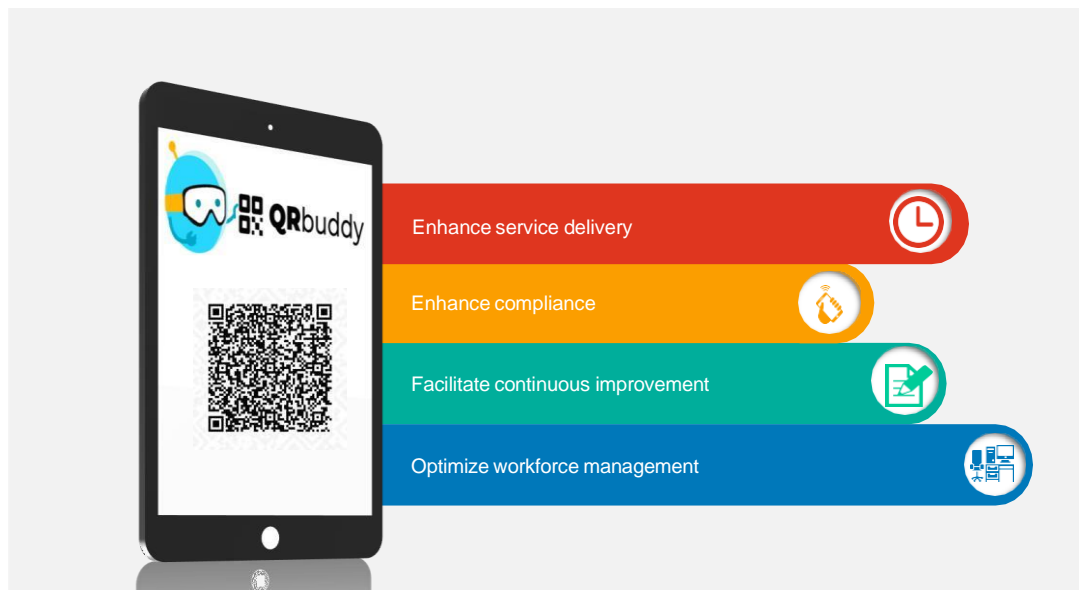


Fig 1: Values added by QR Buddy in hospital operations

Section 2: - Mode of data collection

Detailed **data collected from supervisors overseeing maintenance, housekeeping, IT, dietetics, and the patient portal departments** to understand their service demands. Additionally, collected **data on hospital staff to determine appropriate account roles, categorizing individuals as admin account holders, supervisor account holders, or staff account holders.**

Section 3: - General findings during internship

Project 1: Digital Transformation in Hospitals: QR Buddy as a Tool for Communication and Operational Excellence

The digitalization of hospital operations using QR Buddy was implemented across the following hospitals:

- Marengo Asia Hospital, Faridabad
- Metro Hospital, Faridabad
- RG Stone, East of Kailash
- Kalra Hospital, Kirti Nagar

About the project: It is a pioneering project to digitalize hospital operations using QR Buddy. The core objective of this project is to streamline and enhance the efficiency of operations within the hospital environment. By strategically placing QR Buddy scanners throughout the hospital, each task assigned to staff members is tracked digitally. When a task is assigned, a ticket is generated and a notification is sent directly to the responsible person, ensuring prompt awareness and action. Each task must be completed within a specified Turnaround Time (TAT). If the task is not completed within this timeframe, the system automatically escalates the issue to a higher authority, ensuring accountability and prompt resolution. This innovative approach aims to reduce delays, improve workflow efficiency, and enhance overall patient care by leveraging the capabilities of QR Buddy in a hospital setting.

My role in internship:

- Gathering comprehensive data about all the services required by different hospital departments.
- Collecting detailed information from supervisors about the staff to create their accounts on QR Buddy.
- Conducting training sessions for staff and supervisors across all departments to ensure they understand how to use QR Buddy effectively.
- Coordinating the live rollout of QR Buddy, executing it wing by wing and floor by floor. Continuously monitoring the system to ensure it operates smoothly, and evaluating its performance.
- Addressing any issues that arise by interacting with the tech team to find and implement solutions.

Section - 4: Conclusive learning, limitations and suggestions for improvement

4.1 Conclusive learnings:

- Developed skills in managing and leading teams, understanding the dynamics of motivating staff, delegating tasks, and ensuring accountability.
- Presenting complex information to top-level management honed my ability to communicate clearly, concisely, and confidently.
- understood the significance of integrating technology into healthcare operations to improve efficiency, accuracy, and patient outcomes.
- Encouraging staff to adopt new technologies involved demonstrating the benefits, providing training, and addressing resistance to change.

4.2 Limitations:

- Many Group D staff members showed a significant reluctance to adopt new technologies, preferring traditional methods over digital solutions.
- Hospitals currently do not maintain comprehensive data on the number of requests or complaints generated each month. Without accurate data, it is difficult to estimate the number of tickets that should be raised in the QR Buddy system.

4.3 Suggestions for improvements

- Establish specific deadlines by which hospitals must provide relevant data to the QR Buddy team. This will ensure timely processing and integration of information.
- Implement a system for regular follow-ups and reminders to hospitals to adhere to the data submission timelines, thereby maintaining consistency and reliability.
- Collaborate with the administration to educate and train the hospital staff about the introduction and benefits of the new technology. This will help in minimizing resistance and enhancing smooth adoption.

Digital Transformation in Hospitals: QR Buddy as a Tool for Communication and Operational Excellence

Section 1: Introduction to Digital Transformation in Hospital Management

With the introduction of technology lives has got much simpler and similarly the hospital management too. Digitalization has brought a significant difference the way hospitals operate, manage resources, and deliver patient care. This section provides an overview of the concept of digital transformation in hospital management, highlighting its importance, key drivers, and the role of technology in enhancing operational efficiency and patient outcomes.

1.1 Role of Technology in Hospital Management

Technology plays a critical role in facilitating digital transformation in hospital management. Electronic health records (EHRs) digitize patient information, making it easily accessible to healthcare providers and improving care coordination. Hospital management systems (HMS) automate administrative tasks such as appointment scheduling, billing, and inventory management, streamlining operations and reducing paperwork. BLE (Bluetooth low energy) for tracking patient time in different surgical phases holds immense potential to revolutionize hospital operations and improve patient experiences. RFID (Radiofrequency identification) tags for asset tracking and inventory management.

1.2 Research question

How has the implementation of QR Buddy at Metro Hospital Faridabad contributed to staff optimization, particularly in terms of the efficient allocation, utilization and optimization of General Duty Assistants (GDAs) across various wings and floors?

1.3 Objectives:

Primary objective: To efficiently manage and optimize the hospital staff, particularly General Duty Assistants (GDAs), to ensure optimal utilization and workload distribution across different hospital wings and floors of Metro Hospital, Faridabad.

Secondary objective: To bring digitalization in hospital operations, thereby enhancing transparency and turning verbal communication to effective communication.



Fig 2: Different technologies used by NXT Designs in hospital

Section 2: Mode of data collection

Secondary data collection is done by to identify trends and service demands in hospital. Compiled lists of staff and supervisors from the hospital's database in order to create account holders as admin account, supervisor account and staff account. Gathered data about General Duty Assistants (GDA) in wing A and wing B of Metro Hospital, Faridabad by reviewing duty rosters, shift schedules, and departmental staffing records.

Section 3: Methodology

3.1 Research design

Research conducted is primarily descriptive and analytical, aimed at understanding the staffing structure and allocation of General Duty Assistant (GDAs) in Metro Hospital. A quantitative approach was used to collect and analyze numerical data related to GDA staffing.

3.2 Data collection method

Secondary data collection was done from human resource database, duty rosters and staffing schedules.

3.3 Data collection process

Initially data was collected regarding total number of GDAs assigned in Wing A and Wing B of Metro Hospital, Faridabad.

Subsequently, data was gathered about the number of GDAs allocated to each floor within Wing A and Wing B. This required detailed examination of departmental staffing records and shift schedules.

Planning minimum number of GDA per floor

An analysis was conducted to determine the minimum number of GDAs required for efficient operation on each floor. This involved assessing the workload, patient volume, and service requirements of each floor.

Creation of GDA pool

After determining the minimum staffing needs for each floor, any surplus GDAs allocated to a GDA pool.

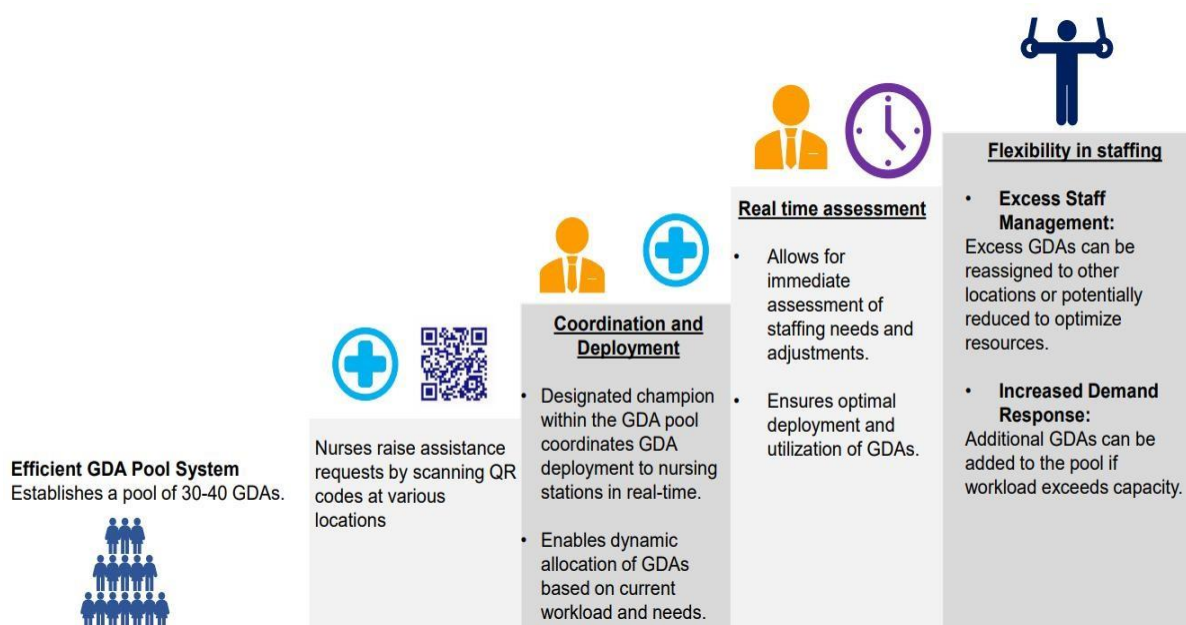


Fig 3: Method used for staff optimization

Section 4: Data findings and interpretation

Basis above mentioned methodology, following findings were concluded:

There is a **total of 177 GDAs**, with **79 assigned to Wing A and 98 to Wing B**. The analysis considers all floors of both wings, examining the number of rooms, workload, types of departments, and services on each floor. Based on these findings, tables were prepared for both Wing A and Wing B to show the number of GDAs on each floor before and after the implementation of QR Buddy. The tables also highlight the number of GDAs allocated to the GDA pool.

4.1 Wing A GDAs distribution

In Wing A, prior to the implementation of QR Buddy, a total of 79 General Duty Assistants (GDAs) were assigned. After the implementation of QR Buddy, the number of GDAs in Wing A was reduced to 49. The remaining 30 GDAs were allocated to the GDA pool, where their functioning and operations were monitored for a month. This reallocation and subsequent analysis provided valuable insights into the efficiency and effectiveness of QR Buddy in optimizing workforce distribution and managing workload within Wing A.

GDAs distribution in Wing A			
Wing A	Before QR Buddy	After QR Buddy	Kept in GDA pool
Basement	6	4	2
Ground floor	12	7	5
First floor	5	3	2
Second floor	11	7	4
Third floor	13	9	4
Fourth floor	17	10	7
Fifth floor	15	9	6
Total	79	49	30

4.2 Wing B GDAs distribution

Similarly in Wing B, a total of 98 General Duty Assistants (GDAs) were assigned before the implementation of QR Buddy. Following the implementation, the number of GDAs in Wing B was reduced to 53. The remaining 45 GDAs were transferred to the GDA pool, where their functioning and operations were observed for a month.

GDAs distribution in Wing B			
Wing B	Before QR Buddy	After QR Buddy	Kept in GDA pool
3 rd Basement	3	1	2
2 nd Basement	4	2	2
Basement	7	4	3
Ground floor	14	6	8
First floor	3	1	2
Second floor	4	2	2
Third floor	17	10	7
Fourth floor	12	8	4
Fifth floor	16	9	7
Sixth floor	18	10	8
Total	98	53	45

Section 5: Conclusion

After observing the functioning and operations of the GDAs kept in the pool for a month, it was found that not all GDAs were utilized efficiently.

In Wing A, out of the 30 GDAs in the pool, only 22 were utilized efficiently, while the remaining 8 were underutilized. Similarly, in Wing B, out of the 45 GDAs in the pool, only 34 were efficiently utilized, with 11 being underutilized.

This results in a total of 19 GDAs across both wings who were not effectively utilized. These underutilized GDAs can be redeployed to other locations where there is a greater need, or their layoff can be considered. This interpretation highlights areas for potential optimization in workforce management and resource allocation though QR Buddy.



Fig 4: Training of Dieticians at Metro Hospital, Faridabad



Fig 5: Training of Supervisors and Staff of housekeeping department at Metro Hospital, Faridabad



Fig 6: Training of Maintenance department in console unit at Metro hospital, Faridabad

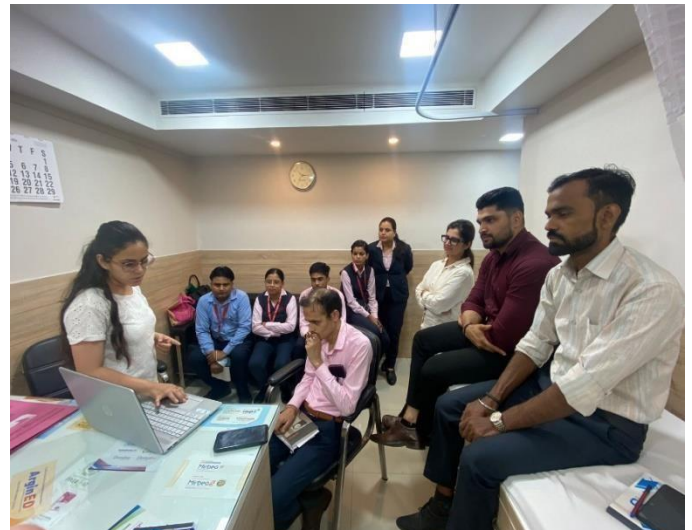


Fig 7: Training of Supervisors of Housekeeping, Maintenance and IT department at RG Stone, East of Kailash

ANNEXURE

Time Schedule

S. No.	Name of Hospital	Date(s) of visit	Work done	Interacted with
1	Metro Hospital, Faridabad	22 nd April – 26 th May, 2024	Training of Maintenance dept.	Quality Dept- Dr. Himanshu (Quality assurance manager) Mrs. Sonali (Quality Improvement Coordinator) Maintenance Dept- Mhd. Tauheed (HOD HK Dept), Mr. Amit (HK Supervisors)
2	Metro Hospital, Faridabad	29 th May – 3 rd April 2024	Training of HK Supervisors	Quality Dept- Dr. Himanshu (Quality assurance manager) Mrs. Sonali (Quality Improvement Coordinator) HK Dept – Mr. Rohit (HK Manager) Mr. Sunil, Mr. Rahul Chand, Mr. Vishvendar (HK Supervisors) Mr. Manish, Miss Laxmi, Mr. Sahil, Mr. Abhishek (Floor Supervisors)
3	Metro Hospital, Faridabad	6 th April – 8 th May, 2024	Training of Dieticians	Quality Dept- Dr. Himanshu (Quality assurance manager) Mrs. Sonali (Quality Improvement Coordinator) Dietetics dept- Mrs. Rashi (Head Dietitian) Mrs. Kaushiki, Mrs. Anita (Dietetics Supervisors) Miss Shalini, Miss Neha, Miss Nisha (Dietetics staff)
4	Metro Hospital, Faridabad	9 th May – 13 th May, 2024	Training of Floor Coordinators	Mr. Kush, Mrs. Shweta, Mrs. Rajesh, Mrs. Vineeta, Mrs. Himanshi, Mr. Vikas (PROs)
5	Marengo Asia, Faridabad	16 th May, 2024	Audit, solved technical problems, Training of new staff	Mr. Gopal Thapa (Quality assurance manager) Mr. Amit (Floor Supervisor of HK dept)
6	Metro Hospital, Faridabad	17 th May, 2024	Solves technical problem faced by Dieticians	Mrs. Rashi (Head Dietitian)
7	Marengo Asia, Faridabad	20 th May, 2024	MoM with nursing superintendent and HK supervisor,	Mr. Gopal Thapa (Quality assurance manager) Mrs. Teresa (Nursing Superintendent) Mr. Gaurav, Mr. Anwar (HK

			QR Codes generated for new locations	Managers)
8	Metro Hospital, Faridabad	21 st May – 27 th May, 2024	Training of Nursing Staff at Nursing stations Accounts created and access given to all nursing stations	Mrs. Sonam (Nursing Superintendent)
9	RG Stone, East of Kailash	28 th May, 2024	MoM with Deputy manager and operations excellence manager, Location mapping of hospital	Mr. Bhaskar (Deputy manager if IT) Mrs. Nitya (Operations excellence manager)
10	Kalra Hospital, Kirti Nagar	31 st May, 2024	MoM with Medical Superintendent and Quality Assurance Manager Location mapping of hospital	Dr. Ravi (Medical Superintendent) Dr. Sandeep (Quality Assurance Managers) Mr. Ajay (Quality Assurance Coordinator)
11	RG Stone, East of Kailash	3 rd June – 10 th June, 2024)	Training of Supervisors of different dept.	Mr. Bhaskar (IT Deputy Manager) Mrs. Nitya (Operations excellence Manager) Mrs. Shilpi (Assistant Manager) Mr. Umed (HK Supervisor) Mr. Bhupendar (Maintenance Supervisor)
12	Kalra Hospital, Kirti Nagar	11 th June- 21 st June, 2024	Training of Supervisors of different dept.	Mr. Ajay (Quality Assurance Coordinator) Mr. Amit (HK Supervisor) Mr. KH Sharma (Maintenance Supervisor)

Tanya Dua ST report

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