Summer Training At

MEDANTA-THE MEDICITY

GURUGRAM

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A Report by

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Global Health
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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Ritima Garg** student of MBA (Hospital and Health Management) Batch 2020 - 2022 IIHMR University, Jaipur has successfully completed her Internship with **Global Health Private Ltd. (GHPL) Medanta – The Medicity**, Sector 38, Gurgaon-122001(Haryana)

. **Department- Medical Administration & Clinical Operations**

. **Project Title-1** A Cross Sectional and observational study to asses the Knowledge, Attitude and Practices among Health workers in a Covid Ward towards Rationale use of personal Protective Equipment (PPE) In Medanta Hospital.

. **Project Duration:** 03.05.2021 to 26.06.2021

We wish her all the best for her future endeavors.

For **GLOBAL HEALTH PVT. LTD**

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Dr Ritima Garg

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Date:

Place:

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ABBREVIATION	FULL FORM
OT	Operation Theatre
MRD	Medical Records Department
EMR	Electronic Medical Records
IPSG	International Patient Safety Goals
MT	Medical Transcriptor
GDA	General Duty Assistant
PPE	Personal Protective Equipment
HCW	Health Care Worker
i.e.,	That is
KAP	Knowledge, Attitude and Practices
COVID-19	Corona Virus Disease

OBSERVATIONAL LEARNINGS

SECTION 1
INTRODUCTION

Medanta, The Medicity, Gurugram established in 2009 is voted as the best private hospital in India by news week. It started with a vision that came to Dr Naresh Trehan, while practicing surgery at NYU Medical center in USA. He realized India needs a multispecialty hospital which not only treats but even trains and innovate, matching the international standard of technology, infrastructure, care, and fusion of Indian tradition with modern medicine.

Medanta was established with a sole mission of delivery world-class, holistic, and affordable healthcare and to build a dynamic institution that focuses on the development of people and the new knowledge. It works on leadership and excellence, integrity and courage, compassion and service, collaboration, learning and innovation.

Medanta's massive 2.1 million sq ft. campus provides 1,600+ beds and houses facilities for over 22+ super- specialties, all under one roof. Each floor is dedicated to a specialization to ensure that they function as an independent hospital within a hospital and yet have the comfort of collaborating on complex cases. Patients are provided with multiple options for treatment, the most suitable of which are arrived through a cross- function, cross- specialization committee such as Tumor board that decided the best course of action.

Medanta, Gurugram has 800+ doctors, 1250 beds facility and 29 super specialties. Medanta houses 6 centers of excellence which provides medical intelligentsia, cutting edge technology and state-of-the-art infrastructure with well-integrated and comprehensive information system.

The international patient services organize treatment packages with help of assistance and provide facilities such as airport pick up, sightseeing trips and hotel reservations. Treatment journey at Medanta is ensured hassle free. The medical history is analyzed on appropriate treatment solutions, schedule an online(video) appointment, confirming the traveling dates, assistance at every step from admission to discharge with all the documentations been taken care of and follow up after leaving for home via telemedicine.

In 2018, India entered the age of patient specific 3D printed implants at Medanta, Gurugram.

SECTION 2
MODE OF DATA COLLECTION

The primary data for this observational study was collected and compiled from Medanta's official website and Spandan portal.

The website had data about the Medanta's history, the data was collected and compiled.

The Spandan portal is a portal developed for Medanta's employees. The EHIS section in the portal, talks about the roles of different departments.

There were video presentations at the time of orientation and on the portal, from where some data has been collected.

SECTION 3

GENERAL FINDINGS ON LEARNINGS: OPERATIONS- FLOOR MANAGER

- Floor manager starts the day with **Safety hurdle**, also known as 5 minutes briefing with nursing supervisor, clinical pharmacist, dietician, GDA and security. The discussion involves information about high-risk patient, elderly patients i.e., above 60 years, any complaints to nursing staff, OT patients, ICU patients.
- Checking all the **Night Billing Patients,** requirements are on track such as 12 AM billing activity is sent or not by the nursing staff, ensure with the medical transcriptor about the readiness of the discharge summary, Sending the final discharge summary to the TPA desk in case of TPA (insurance) beneficiary patients and shifting the patient on pseudo bed (D/S lounge) after the counselling of the patient and the attendants.
- **Meeting all the new admission and transfer- ins** from different wards from last evening. Ensure that the instructions are given to the patient such as giving them the room orientation which includes the call bell for nursing staff and zero dialing that is service related or online customer care. The complaint card with phone number of the floor manager is provided and the same is mentioned on the white board present in the room. The fall prevention education is given in which the patients are instructed not to move without any assistance or with help of attendants. The side rails of the bed would be lowered only by the nurses and no jumping is allowed. The fall prevention video is specifically shown to the patients. Ensure the doctor had met the patient, initial assessment is done, and the medication orders are written within 2 hours.
- **Patient rounds** are done least one a day to clarify any patient concerns or queries, billing counselling/ interim bills which are required. Addressing any complaints regarding the nursing staff, dietician, housekeeping, doctors, MS office as required. Coordinating for extra attendant pass when approved by the physician, coordinating for home food/ home medications/ short term leave pass when approved by the physician. Coordinating for request of case summaries and reports for second opinion with the MS office.
- **Physician rounds** for knowing the discharge plan to promote the planned discharge, convey any pending bills or billing concerns to admitting doctors/ Chairpersons. Convey

any patient dissatisfaction relating to the clinical care or need of more counselling to the physician team. Coordinating with the team leader for urgent radiology investigations or any test or procedures to be done. Follow up on urgent referrals to ensure they are done in time. Arranging multidisciplinary team meetings for long stay of the patients.

- **Discharge management:** Ensuring timely discharge by checking timely submission of billing activity to the billing department, preparation of discharge summary by the medical transcriptor and checking by the doctors, timely return of the medication to the pharmacy and follow up with the billing for the billing delays. **Day minus 1 counselling** to the attendants/ patients a day prior to the discharge regarding the process, time, and clearance. Explaining the bills to the patient whenever required, especially for the long stay and ICU patients. Follow up with the doctors of the planned discharges and updating the IP stat for planned discharges 2 times- before 1pm and before 4pm so that MT can prepare the discharge summary, billing can prepare the interim bills and nursing can plan for the pharmacy returns in the night.
- **LAMA Management:** Counselling of the patient who are leaving against the medical authority. Sending the daily reports of total discharge, LAMA, and mortality of last 24 hours of respective areas to MS office.
- **Financial issues**- financial clearance, TPA, CGHS: Ensuring financial clearance before any procedures or expensive medications. Coordinating financial clearance for patients with emergency procedures with negative financial balances. Coordinating financial clearance with the TPA desk by providing them the case, summary, justifications from the doctor and clarifications requested by TPA. Explaining the process of pay and go to TPA at the time of discharge.
- **Bed Management:** Arranging bed shifting of the patient from ER to ICUs/Ward, OTs to ICUs, ICUs to Wards/HDU in coordination with admission desk.
- **Infection control**: Getting the restricted antibiotic justification form filled by the prescribing physician and doing hand hygiene shadow audits at the EMR application.
- **Legal Compliances:** Filling up and submitting notifications for all the notifiable diseases to MRD (dengue, H1N1, Tuberculosis etc.)
- **Quality and accreditation:** Ensuring completeness of the medical records for the doctors, physiotherapists, and dieticians, Collect and analyze the outcomes data for their specialty.

Monitor compliances to the clinical pathway, develop new pathways where required. Report and root cause analysis of incidents- near misses and adverse events, devising process improvements. Training of the doctors on quality processes. Closure of tracer audits in coordination with the team doctors, quality champions and chairmen. Different audits form the EMR application such as IPSG and MRD audit. Identification and implementation of one quality improvement initiative in every specialty. Organize quarterly departmental meeting on quality covering outcomes data, clinical pathway compliances, hospital acquired infection rates, hand washing compliance, prescription errors, antimicrobial stewardship compliance, outpatient prescription availability compliances, tracer findings, incidents.

- **Facility Issues:** Apprising the engineering team of any maintenance concerns such as flooring, breakdown, repairs, replacements etc. Escalating and resolving IT related issues such as the issues of computers, printers, lead line phones.
- **D minus 1 Counselling-** Introducing oneself and informing about the discharge lounge when the patient is discharged but has later travel plans. The patients are introduced to discharge lounge which has the facility of comfortable recliners, food for patients, comfortable seating arrangements for the attendants, daily newspaper, dietician/ physiotherapist, pillows, and blankets if required by the patient.

SECTION 4
CONCLUSIVE LEARNING

4.1 CONCLUSION

In all, the floor manager ensures proper functioning of the floor, solving any matter related to the administration, ensuring customer satisfaction, and training and guiding the staff to give maximum result. It also handles all the clinical administration of the floor, managing work and maintaining a good rapport between the floor staff. One major role of a floor manager also includes coordinating with supervisors and ensuring proper compliance.

While working as an intern as a floor manager, managing two floors, I realized the job requires a lot of patience and responsibility. It also requires efficient interpersonal and communication skills. It is responsible for ensuring that all the floor requirements are met, and there is smooth functioning of the floor. It also requires assigning duties to the staff and ensuring that the different departments work in coordination. The discharge process is one of the major concerns, and it is to be done with proper efficiency and accuracy. Every day is a different task, which must be dealt with utmost care.

4.2 LIMITATIONS

- A road map for Medanta infrastructure should be constructed for ease of movement.
- Manpower is less in number as compared to the workload.
- There are gaps between the staff, be it nursing or the doctors.
- There is delay in carrying out medical procedures by the nursing staff.
- They staff necessarily does not lack knowledge, but they are way behind practicing and incorporating the same in their attitudes.
- The discharge process takes a lot of time than the proposed TAT, this should be looked into.

PROJECT REPORT

A CROSS SECTIONAL AND OBSERVATIONAL STUDY TO ASSESS THE KNOWLEDGE, ATTITUDE AND PRACTICES AMONG HEALTH WORKERS IN A COVID WARD TOWARDS RATIONALE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) IN MEDANTA, GURUGRAM.

SECTION 1
INTRODUCTION

1.1 INTRODUCTION

The COVID-19 widespread constitute the biggest worldwide public health emergency in a century, with overwhelming wellbeing and financial challenges.[1] Coronavirus Infection 2019 (COVID-19), a dangerous respiratory illness caused by SARS CoronaVirus-2 (SARS CoV-2), was announced a worldwide widespread on 11th Walk 2020 by World Wellbeing Organization (WHO) [2]

As per reports stated on 26th May'2021 India has encountered 26 million Covid-19 patients ranked second after US. It is the new hub of the COVID pandemic. The second wave recently has been overwhelming to the healthcare system, leaving hospitals struggling to cope up with this crisis and shortage of critical drugs and oxygen supply. [5]

Healthcare specialists are more susceptible to COVID-19 contamination than the common people as they frequently encounter contaminated people. Healthcare professionals have been working under upsetting conditions without appropriate gear and had to take decisions which can hamper their health and risk their lives. The crisis is particularly challenging in delicate and low-income nation settings where health care and their frameworks are already at frail. [3]

PPE is a defensive wear to protect the wellbeing of workers as they minimize the exposure to any viral or bacterial agent. Its utilization could be an essential technique which can anticipate the transmission of infection in hospitals or clinics where health experts specifically meet contaminated patients. Agreeing to FDA, PPE works as an obstruction between an individual's outer organs and viral and bacterial contaminations.[4]

PPE kits contain aprons, gowns, hoods, masks, eye wears, and face covers, to protect the different skin membranes of the person who is wearing from getting infected, and N95 masks or respirators from preventing breathing of contaminated particles. [6]

With the rise of COVID 19 cases at alarmingly rate in our nation, suitable utilization of PPE is one of the most important necessity and vital activities to avoid COVID contamination in a hospital setting of any measure and intensity. Another foremost overlooked though basic perspectives of PPE by majority of analysts is that does our HCWs utilize the PPE packs legitimately without contaminating themselves?

Training on intervals on the judicious utilize of PPE at the time of COVID-19, stated by the WHO on March 19, 2020, emphasized on "correct and thorough conduct from all the health-care professionals" particularly during doffing of the PPE. In a study, HCWs complained that PPE utilization as a very tedious handle amid practicing although they accepted in its adequacy. [8]

These three perspectives that are knowledge, attitude, and practices (KAP), are very essential to completely know and analyze the conduct of HCWs. Knowledge tells about an individual's status to perform the conduct, attitude depicts around his/her genuineness as to why he or she considers that the conduct is stated critical, and lastly practice during doing his duties shows if the person is cautious in practicing the proposed conduct.

Despite the accessibility of guidelines, attitude and practice towards disease control and prevention measures might change due financial settings, arrangement of the healthcare framework, and the convictions and inspiration of the HCWs of a nation. It can be reasonably accepted that great information and a positive attitude with respect to the utilization of personal protective measures ought to lead to the correct practice of IPC.[7]

Even after dealing with COVID-19 for almost year and a half, we are still dealing with the spread of infection among health workers through infected PPE, and a lot of healthcare workers have even lost lives because of virus contamination.

As the analysts suggest, Removal of PPE could be a complex method, with studies suggesting that there are high rates of doffing mistakes even with basic PPE, and that self-perceived

capability connects ineffectively with proper utilization. In any case, infection is more likely to happen when inaccurate method is noted. Ensuring secure practices for high-risk, high-potential exposure scenarios, minimizing dangers of infection in this manner requires the user to be well prepared and with demonstrated competence, as well as utilizing secure PPE components.[9]

The current worldwide emergency has highlighted the requirement for strict disease control in health care settings. The requirement for educating and preparing expansive numbers of health care workers in a convenient way has come the need of the hour. The need for secure compelling donning and doffing of individual assurance hardware (PPE) is a critical part of protection for the HCW's. Suitable utilization of PPE makes a difference to diminish the potential for move of irresistible infection to their patients, their families, and others. [8]

The following are recommendations for the rational utilization of PPE at health care facilities. PPE includes gloves, surgical masks, eye wear or a face shield, and gowns, and respiratory masks (i.e., N95) and aprons. It is suggested for HCPs, infection prevention and control (IPC) workers and health care managers. Hand hygiene remains one of the most primary measures for all persons for the prevention and control of majority of the respiratory viral infections -, including 2019-nCoV infections or COVID-19. This can be performed with mild soap and water or alcohol-based hand sanitizers or rubs. Wearing a surgical mask is one of the preventive techniques to restrict spread of most respiratory infections, one of which is COVID 19, is useful when worn by the persons suffering from the disease or contacts of the patients. These measures are advised to use in combination with other IPC measures to prevent transmission of COVID-19 infection from one person to another, depending on the specific situation. [11]

Donning: Putting on the Personal Protective Equipment.

It is indicated when entering red zone confirmed or suspected COVID areas.

STEPS FOR DONNING ARE INDICATED AS FOLLOWS:

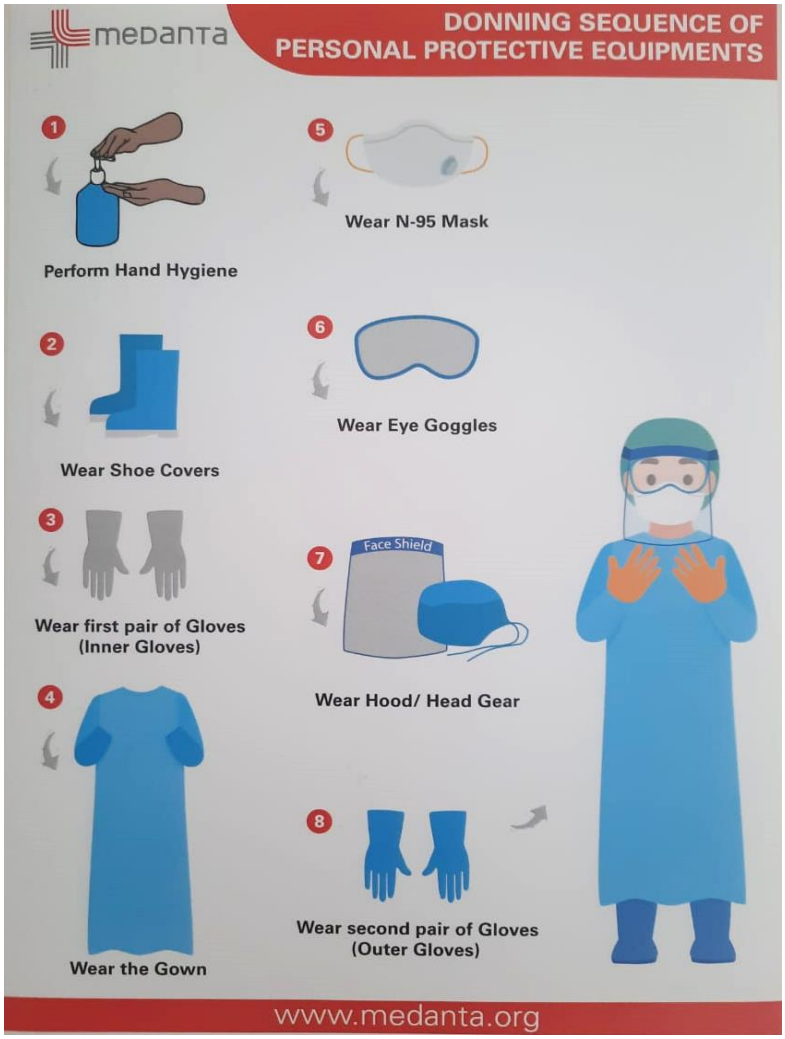

Fig. no. 1

Doffing: Putting off of Personal Protective Equipment

It is indicated after exiting confirmed or suspected COVID wards.

STEPS FOR DOFFING ARE INDICATED AS FOLLOWS:

Fig. No. 2

Practicing any behaviour is not simple in case an individual does not have correct demeanor towards it. Moreover, attitude toward any practice has no use if an individual is not having correct and significant information approximately how to practice it. This accounts as the most convincing reason for carrying out this KAP study on donning and doffing practices of PPE during the current COVID-19 widespread to recognize and get it the gaps and suggest methodology which are easy and effective in the longer run.

1.2 RATIONALE

The first aim was to perform a cross sectional study of the knowledge, attitude, and practices of health care professionals for doffing and donning. The second aim was to conduct an observational study to determine the are gaps in the donning and doffing procedures and where exactly these occur in the procedure while they practice it.

1.3 RESEARCH QUESTION

What are the gaps between the knowledge and practices of repeated donning and doffing procedures of PPE for healthcare workers at risk of exposure to infectious agents in the time of COVID 19 pandemic?

1.4 OBJECTIVES

1) To assess the knowledge, attitude, and practices among health professionals in COVID ward towards appropriate use of PPE, i.e., donning, and doffing procedures
2) To observe, the donning and doffing practices of health workers, while they perform these processes on regular basis and record it.
3) To identify gaps and give suggestions to control further spread of infection during these processes.

SECTION 2
METHODS AND MATERIALS

2.1 RESEARCH DESIGN

A descriptive cross-sectional research was done to analyzing the obtained responses. The study was divided into two sections, the first section was the cross-sectional study which focused on knowledge, attitude and practices (KAP) about the right use of PPE. The second section was the observational study aiming at observing the donning and doffing practices in a COVID ward at Medanta, Gurugram. The observational study was done on the basis of observing the staff while they don and doff in specified area.

The study was conducted from May 10th, 2021, to June 6th, 2021, approximately a period of 30 days, amidst the second wave of COVID 19.

2.2 SAMPLING SIZE

The sample size for the cross-sectional study included 50 health-care professionals posted in a COVID-19 ward.

The sample size for the observational study included 30 Health care workers for donning and doffing respectively in COVID ward.

The study population was frontline healthcare providers including nursing staff, doctors (consultants, medical officers), and other paramedical staff (housekeeping staff, medical transcriptionist, pharmacist) who were combating the COVID-19 disease.

2.3 SAMPLING TECHNIQUE

Convenience sampling was used as the sampling technique used for this study.

This type of sampling was done by selecting staff who were easy to reach. This technique was used because the staff was posted on daily basis in the ward, and there was no specified staff.

2.4 MODE OF DATA COLLECTION

The KAP tool was designed analyzing all the donning and doffing practices recommended by WHO. The KAP tool was based on a structured questionnaire was made on Google forms and a hard copy of the same was distributed. It was prepared in English, which was further explained in the regional language while distributing the questionnaire.

A checklist for donning and doffing practices based on the proposed guidelines of the donning and doffing procedures was made.

2.5 STATISCAL ANALYSIS

Data was collected, compiled, and updated on an excel sheet and then analysis was done followed by analysis of the questionnaire. Each of these KAP section was individually analysed for each survey question.

Two studies were compared to the responses received based on the KAP questionnaire and the observations done while donning and doffing of the health care professionals and concluded if the entries done by them in the questionnaire match to what they practice.

SECTION 3
ANALYSIS AND INTERPRETATION

3.1 ANALYSIS AND INTERPRETATION FOR CROSS- SECTIONAL STUDY

50 participants took part in the study. Approximately 58% of nursing staff, 26% doctors and 16% other paramedical staff participated in the survey.

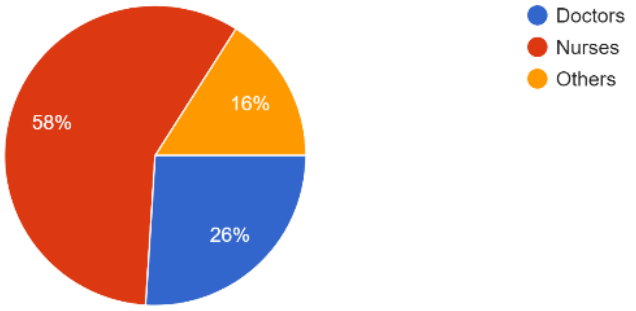

Fig. no. 3

STATEMENT	YES (%)	NO (%)
1. Do you know donning and doffing of PPE practices for health care professionals?	100	0
2. Have you received any formal training or demonstration regarding donning and doffing of PPE?	86	14
3. Do you know the complete procedure of donning and doffing in a hospital?	96	4
4. Do you know all the components of PPE kits used in the hospital?	100	
5. Do you understand the sensitivity and importance of donning and doffing?	98	2
6. Are you aware the virus dispersion occurs more commonly during doffing?	88	12
7. Are you aware about the video on Spandan portal about donning and doffing procedures?	74	26

Analysis showed that 100% health care staff had knowledge about donning and doffing procedures, with 86% of them have received a formal training here in the hospital. It also showed that 100% staff knew about the components of the PPE kit, and approximately 98% knew about the sensitivity and importance of the donning and doffing procedures. On enquiring about the awareness of dispersion of virus only 88% of the HCW's were aware that it is during doffing that there is more virus dispersion, rather than donning.

Analysis exhibit that only 74% of the staff has seen the video uploaded on Spandan.

portal of Medanta about donning and doffing practices.

STATEMENT	YES (%)	NO (%)	NOT ALWAYS (%)
8. Are you aware of the posters/ charts posted at various places in donning and doffing areas?	86	8	6
9.Do you think donning and doffing is a critical process that must be taken seriously by health care professionals?	96	4	0
10. Do you follow strictly the methodical way of donning and doffing of PPE in hospital?	90	8	2
11. Do you think donning and doffing practices are more hyped than it should be especially in COVID-19 areas?	70	30	0
12. Do you find it inconvenient and cumbersome to d medical procedures or deal with patients (patient care) after donning PPE?	68	20	12
13. Do you think, donning and doffing is only important for COVID 19?	36	56	8
14. Do you think, if some other colleague does not practice it properly, it affects your behaviour?	54	38	8
15. Do you agree that strict donning and doffing practices will wear off if the pandemic continues for a very long period?	82	16	2

On analysing the attitudes concerning donning and doffing of PPE,86% staff was aware of the charts/ posters posted at various places in the specified areas and 6% did not do this always, 96% of health-care workers think that donning and doffing of PPE is an important procedure which should be taken seriously and 90% of HCWs claim that they strictly follow the methodical way of donning and doffing. However, 58% of professionals disagreed that donning and doffing is only important for COVID-19. Even after a year of the pandemic, 68% of the staff finds it inconvenient to do regular medical procedures or treat patients after donning PPE and 54 of them agree that if other colleagues do not practice it properly, it affects their behaviour also.

STATEMENT	YES(%)	NO (%)	NOT ALWAYS (%)
16. Do you do donning and doffing for all COVID 19 patients?	94	4	2
17. Which of these following things you follow before donning?			
a. Get enough water for hydration?	92	6	2
b. Remove personal belongings, like jewellery, mobiles etc	100	0	0
c. Wash or sanitize before touching any PPE component?	98	2	0
18. Which of the following you do during donning?			
a. Always perform donning procedure before entering the COVID ward?	100	0	0
b. Check the integrity of PPE kit components before donning?	88	8	4
c. Wear gloves before wearing shoe covers?	30	66	4
d. Wear second pair of gloves before wearing the hood/ head gear?	60	40	0
e. Do you refer to donning and doffing charts before donning or doffing procedures?	64	22	4
19. Which of the following things you do during doffing?			
a. Remove the PPE kit in specified doffing area?	100	0	0
b. Remove gloves first, without sanitizing with a hand-rub?	22	74	4
c. Use glove in glove technique for disposal of gloves?	80	16	4
d. Remove gown before show covers?	52	46	2
e. Turn gown inside out during removal?	86	12	2
f. Sanitize hands after removal of each PPE component?	80	16	2

On reviewing practices of health-care professionals, most of them while attending all COVID-19 patient, i.e., 94% did donning/doffing. When asked about, the protocols they follow before donning, 94% revealed they took enough water before donning, and everyone removed their belongings before starting to don. Also, 98% claimed they wash or sanitize their hands before touching each PPE component. On further analysis, about what all they follow during donning, entire staff performed donning procedure before entering the ward, and 88% checked integrity of the PPE components before donning.

When reviewed about the donning steps, 66% were correct that shoe covers are worn before wearing gloves. On further analysis, it revealed that 60% of the staff wore second pair of gloves before wearing the hood, whereas the guidelines suggest wearing second pair of gloves as the last step. Also, only 64% of the staff refers to donning and doffing charts before performing these procedures.

Studying about how aware the HCWs were about doffing, all of them removed the PPE in specified areas. 22% said they removed gloves first even before sanitizing them, which is the first and basic step, and is the primary source of transfer of infection. The glove in glove technique was used by 80% of the workers, and 86% turned gown inside out before disposing off, to expose the virus in the surroundings. The problem area though was almost 46% of the staff removed gown before show covers which is an incorrect step, which shows shear negligence towards the sensitivity of doffing practice.

3.2 ANALYSIS AND INTERPRETATION FOR OBSERVATIONAL STUDY

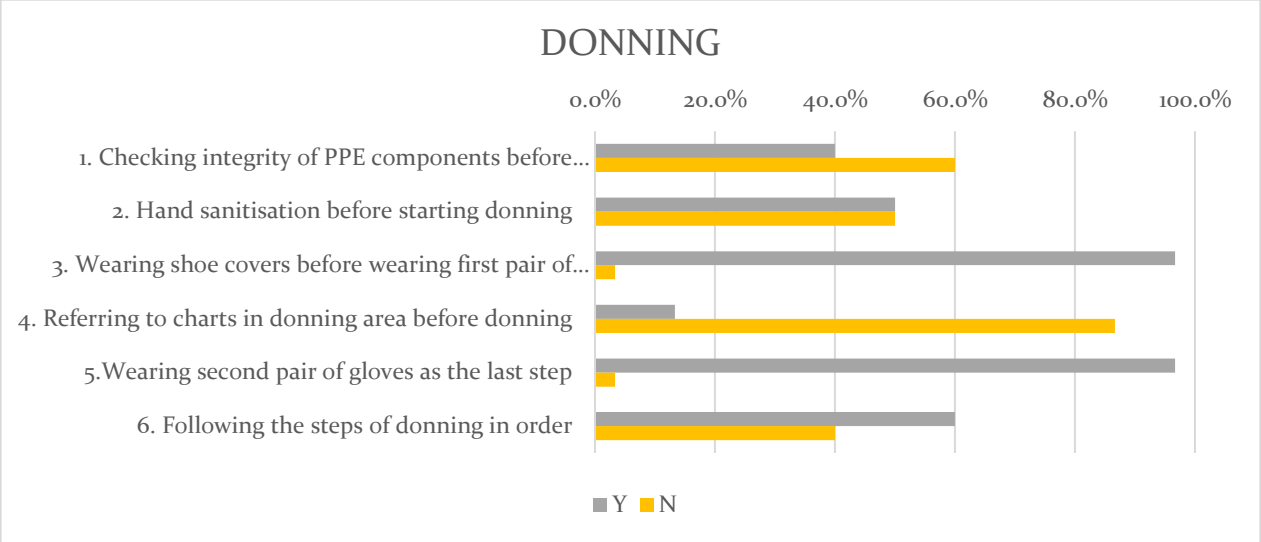

Fig. no. 4

On observing the staff, while they don the PPE, there was a drastic difference between the responses and the observation. Though 88% staff claimed they checked the integrity of components, only 40% practiced it. 50% staff practiced hand sanitization, before starting donning. Almost 97% of the staff wore show covers as the first step of donning practice. While reviewing the observations revealed that only 13.3% of the staff referred to the charts posted in the areas for reference, though the cross-sectional study said 64% of the staff practiced it.

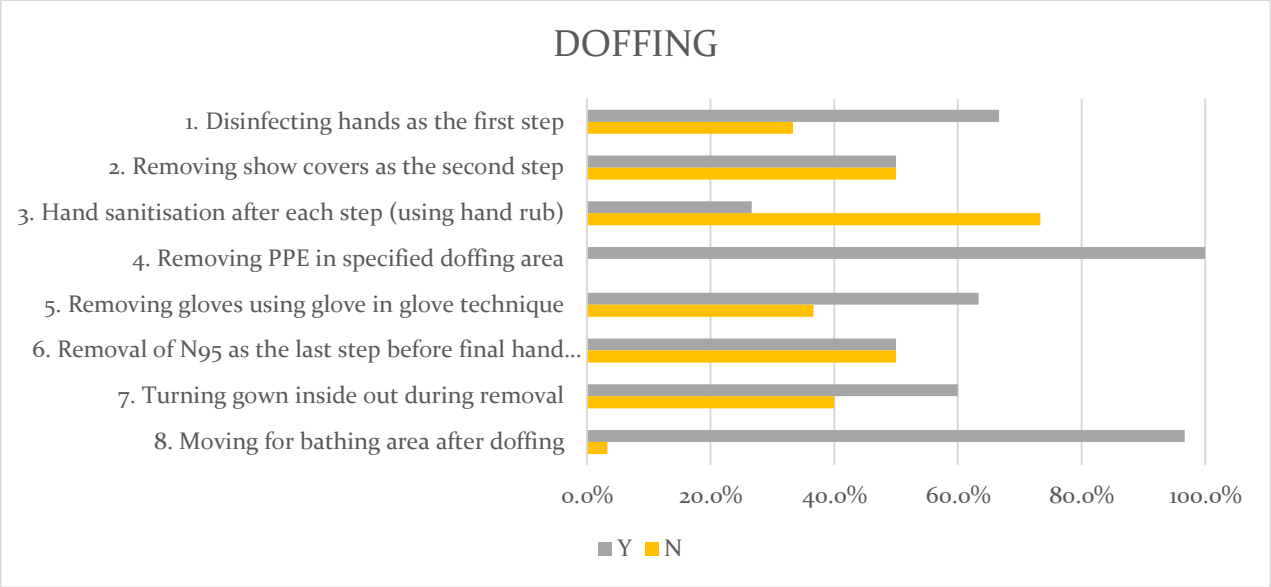

Fig. no. 5

When the doffing procedure was observed in the specified doffing area, results revealed, the primary and the most important step of disinfecting hands before starting the removal of components was done by only 66.7% of the health care workers. Also, though the responses showed that 80% of staff sanitized hands after removing each component, only 27% of them practiced it. These two steps are a major concern. On further observation it was seen that 50% of them removed shoe covers as the second step, and 50% removed N95 as the last step, which shows a lot of difference from the data obtained from the responses. The glove in glove technique was actually practiced by 65% of the workers and turning the gown inside out was done by 60%.

SECTION 4
RECOMMENDATION AND CONCLUSION

Healthcare specialists play a significant role in COVID-19 administration as front-liner workers. They are the primary point of contact with COVID-19 patients in hospitals and laboratories. Subsequently, they are at high chance for serious intense respiratory disorder from SARS-COV-2 contamination. [10]

Incorrect donning and doffing practices raise concern, as these practices are the major source of virus transmission among the Health Care Workers. If the professionals lack KAP, they become susceptible to infectious agents.

From the above study, it was analyzed and observed that, though the staff knew and had knowledge about the steps and sensitivity, they did not actually practice it.

Members in our KAP review showed that because of the cumbersome and tedious manner of donning and doffing technique, they often compromised their own security regardless of having the basic idea and sensitivity of these processes. In my overview, it was observed that however professionals were prepared to adhere to the systematic method as to how donning and doffing practices are done, yet they really did not practice it, which demonstrates an emotionless disposition maybe because of absence of motivation, lack of time and more workload.

After thorough analysis, and comparing the responses obtained and self-observations, there are a few recommendations for the gaps.

While observing, it was seen that the donning and doffing areas lacked enough hand sanitizers, or it was even absent. This led to doffing without sanitization. This can be a major setback. To ensure this, there should be daily checks at the specified areas.

It was also observed that the doffing areas lacked charts, though they were present in donning areas. However, the charts were quite small and almost insignificant. This can be corrected by putting up bigger charts at both the areas, that are visible enough.

Some organisations have donning and doffing assistants, in specified areas, which help the care providers while performing this practice, and ensure proper practice. This is also a good option, which can be included.

Most of the donning areas had TV, so video demonstration is recommended every shift of donning. Even at doffing areas, there should be some similar setup done. This will increase the motivation among the health workers to practice right steps.

Apart from the above recommendations, repeated training for the staff, at regular intervals and teaching about the sensitivity of the situation, is the primary and most important step. This will help in internalizing the practice in their attitudes.

Overall, it can be summarized that this study helped in understanding major problems related to knowledge, attitude and practices happening at the hospital, that can be corrected by mentoring programmes, training, incorporating routine practices by repeated trainings, following basic guidelines, efficient use of resources and regular follow ups. Also, by guiding the staff about critical procedures, which can bring about diminished rate of infection amidst crisis like COVID-19. As the global pandemic continues, all the above suggestions are the need of the hour.

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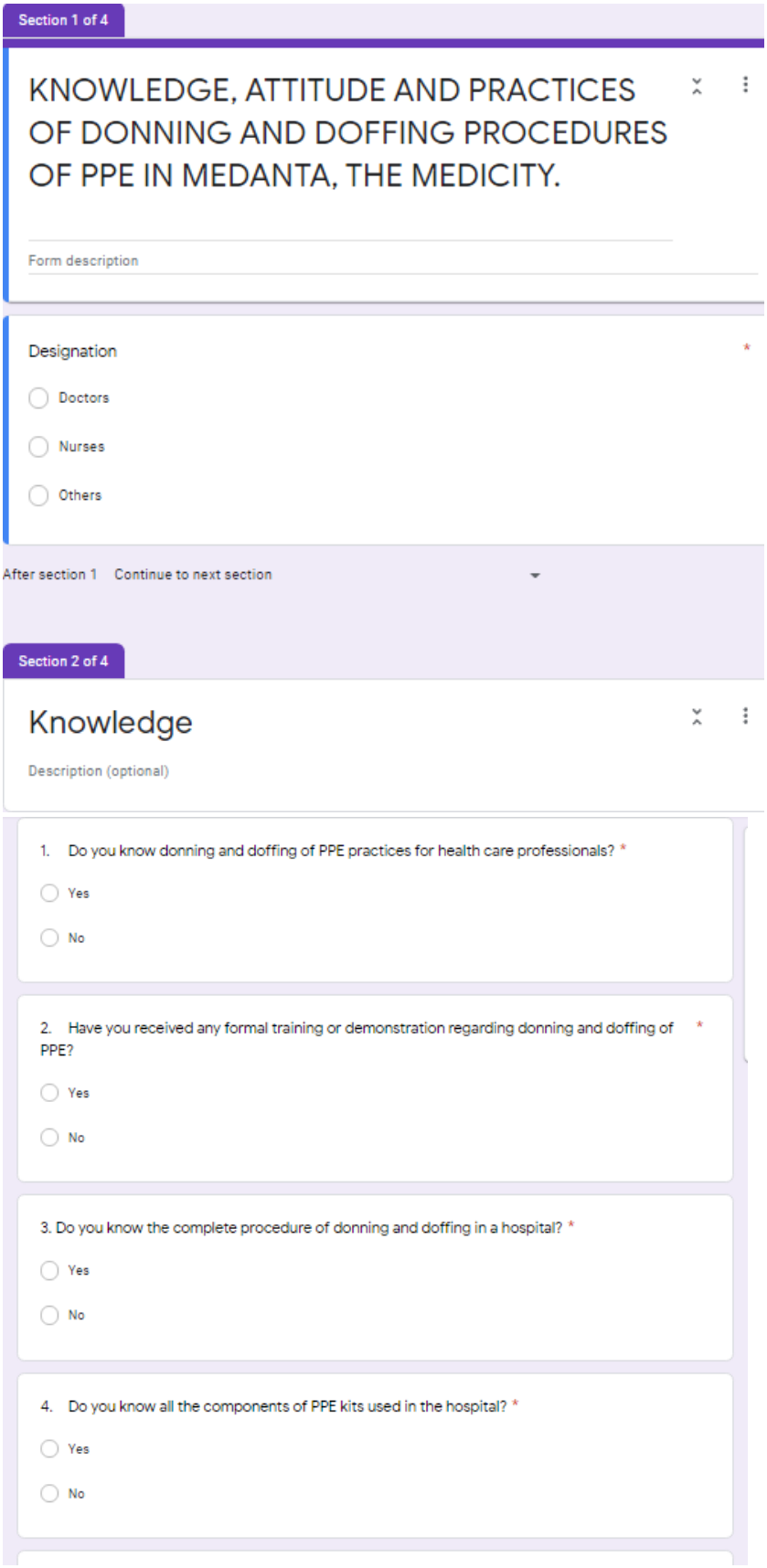
ANNEXURE

A.

Sr. no.	Name of Department	Dates of visit	% Of time spent	Interacted with (Name & Designation)
1.	Operations (as floor manager)	3 May- 26 June (Half Day-5Th June, Leave- 7th June)	96.87 (46.5 days/ 48 days)	Dr. Nikita Jayant (Floor Manager)

B.



Section 1 of 4

KNOWLEDGE, ATTITUDE AND PRACTICES OF DONNING AND DOFFING PROCEDURES OF PPE IN MEDANTA, THE MEDICITY.

Form description

Designation *

- Doctors
- Nurses
- Others

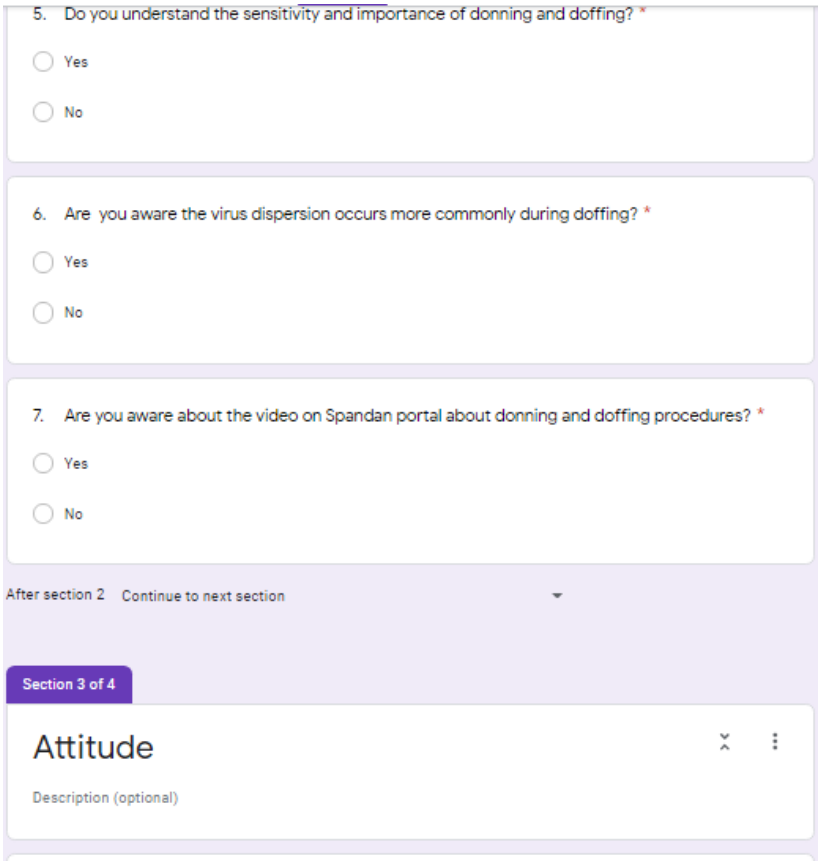
After section 1 Continue to next section

Section 2 of 4

Knowledge

Description (optional)

1. Do you know donning and doffing of PPE practices for health care professionals? *
   - Yes
   - No
2. Have you received any formal training or demonstration regarding donning and doffing of PPE? *
   - Yes
   - No
3. Do you know the complete procedure of donning and doffing in a hospital? *
   - Yes
   - No
4. Do you know all the components of PPE kits used in the hospital? *
   - Yes
   - No


5. Do you understand the sensitivity and importance of donning and doffing? *
Yes
No
6. Are you aware the virus dispersion occurs more commonly during doffing? *
Yes
No
7. Are you aware about the video on Spandan portal about donning and doffing procedures? *
Yes
No
After section 2 Continue to next section
Section 3 of 4
Attitude
Description (optional)

Attitude

Description (optional)

8. Are you aware of the posters/ charts posted at various places in donning and doffing areas? *

- Yes
- No
- Not always

9. Do you think donning and doffing is a critical process that must be taken seriously by health care professionals? *

- Yes
- No
- Not always

10. Do you follow strictly the methodical way of donning and doffing of PPE in hospital? *

- Yes
- No
- Not always

11. Do you think donning and doffing practices are more hyped than it should be especially in COVID-19 areas? *

- Yes
- No
- Not always

12. Do you find it inconvenient and cumbersome to d medical procedures or deal with patients (patient care) after donning PPE ? *

- Yes
- No
- Not always

13. Do you think, donning and doffing is only important for COVID 19? *

- Yes
- No
- Not always

14. Do you think, if some other colleague does not practice it properly, it affects your behaviour? *

- Yes
- No
- Not always

15. Do you agree that strict donning and doffing practices would wear off if the pandemic continues for a very long period ? *

- Yes
- No
- Not always

fter section 3 Continue to next section

Section 4 of 4

Practices

Description (optional)

Practices

Description (optional)

16. Do you do donning and doffing for all COVID 19 patients? *

- Yes
- No
- Not always

17. Which of the following things you follow before donning? *

	Yes	No	Not Always
a. Get enough water for ...			
b. Remove personal belo...			
c. Wash or sanitize befor...			

18. Which of the following you do during donning? *

	Yes	No	Not Always
a. Always perform donni...	○	○	○
b.Check the integrity of ...	○	○	○
c.Wear gloves before we...	○	○	○
d.Wear second pair of gl...	○	○	○
e.Do you refer to donnin...	○	○	○

19. Which of the following things you do during doffing? *

	Yes	No	Not always
a. Remove the PPE kit in ...	○	○	○
b. Remove gloves first, w...	○	○	○
c. Use glove in glove tec...	○	○	○
d. Remove gown before ...	○	○	○
e. Turn gown inside out ...	○	○	○
f. Sanitize hands after re...	○	○	○