



A Study On Awareness of Healthcare Associated Infections Management In An Intensive Care Unit (ICU)

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INTRODUCTION

- According to WHO:

Health care-associated infection (HCAI), also referred to as "nosocomial" or "hospital" infection, is an infection occurring in a patient during the process of care in a hospital or other health care facility which was not present or incubating at the time of admission. HCAI can affect patients in any type of setting where they receive care and can also appear after discharge (more than 48 hours).

- The four most common types of Nosocomial Infections are urinary tract infections, surgical site infection, ventilator associated pneumonia and blood stream infections



Specific Infection Control Measures:

- Hand washing
- Hygiene and uniform
- Barriers: Head Cap, Mask, Apron , Gloves
- Injection Practices
- Equipment Safety
- Isolation
- Surveillance and Infection Control

OBJECTIVES:

- To assess the awareness of Infection Control Practices followed at Sarvodaya Hospital, Faridabad.
- To search for areas of problem and find reasons for the same.

RESEARCH QUESTION?

- What is the Current Awareness of Healthcare Associated Infections Management among Nurses and Doctors in ICU at Sarvodaya Hospital?

RATIONALE:

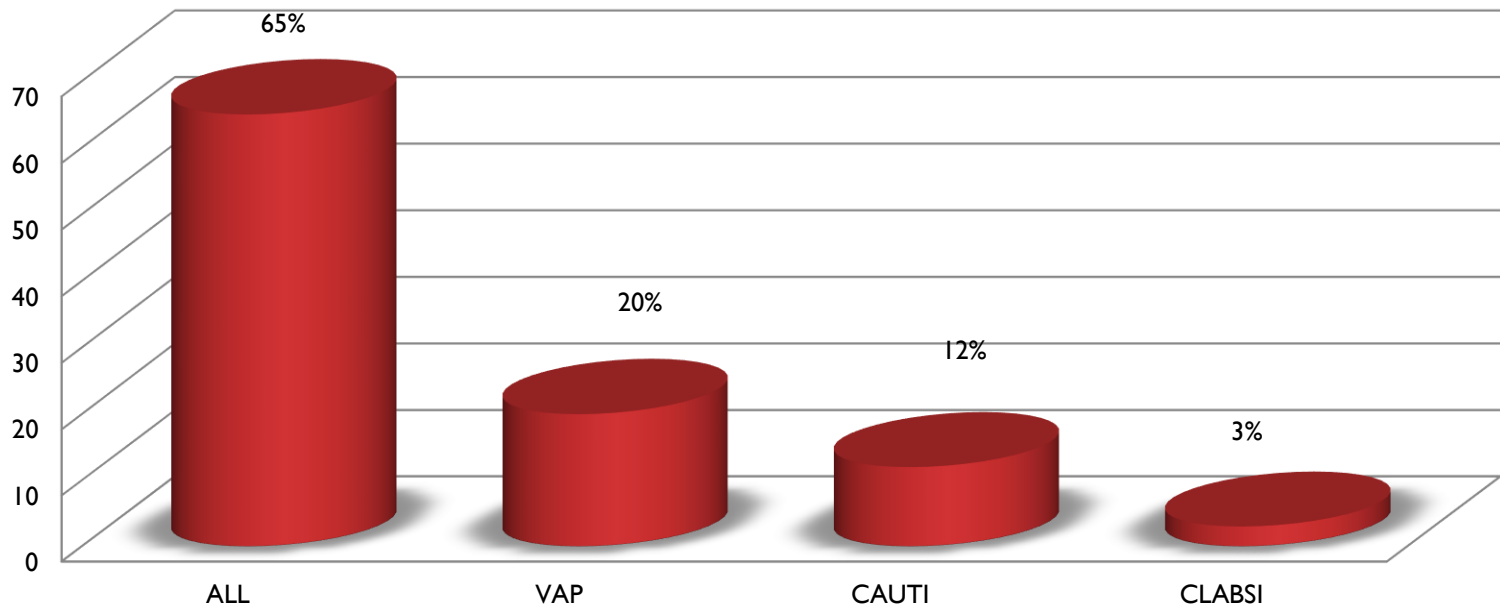
- This study is indented to find out the various Nosocomial Infections encountered in ICU's at Sarvodaya Hospital as Nosocomial infections is one of the major contributing factors that adds to the cost of patient care and major cause of mortality and morbidity in patients leading to increase in average length of stay . Reducing the Nosocomial Infection in ICU's can significantly enhance the Hospital's image.
- Establishing a standard protocol for controlling the Nosocomial Infections in ICU's will help in promoting efficiency amongst the employees and helps in establishing a significant position of the hospital amongst competitors.

METHODOLOGY:

- ***Type of study*** : Descriptive
- ***Study population*** : Doctors, Nurses in ICU'S at Sarvodaya Hospital, Faridabad
- ***Study area*** - All ICU's at Sarvodaya Hospital, Faridabad
- ***Duration of Study*** – 3 months (12 weeks)
- ***Type of Data*** - Quantitative
- ***Technique*** – personally distributed to everybody and requested them to fill in front of the researcher
- ***Tool*** – Questionnaire
- ***Sample size*** – 95(all the doctors and nurses were covered.)
- ***Data*** - Primary
- ***Data entry***- Excel sheet
- ***Data Analysis***- Excel sheet

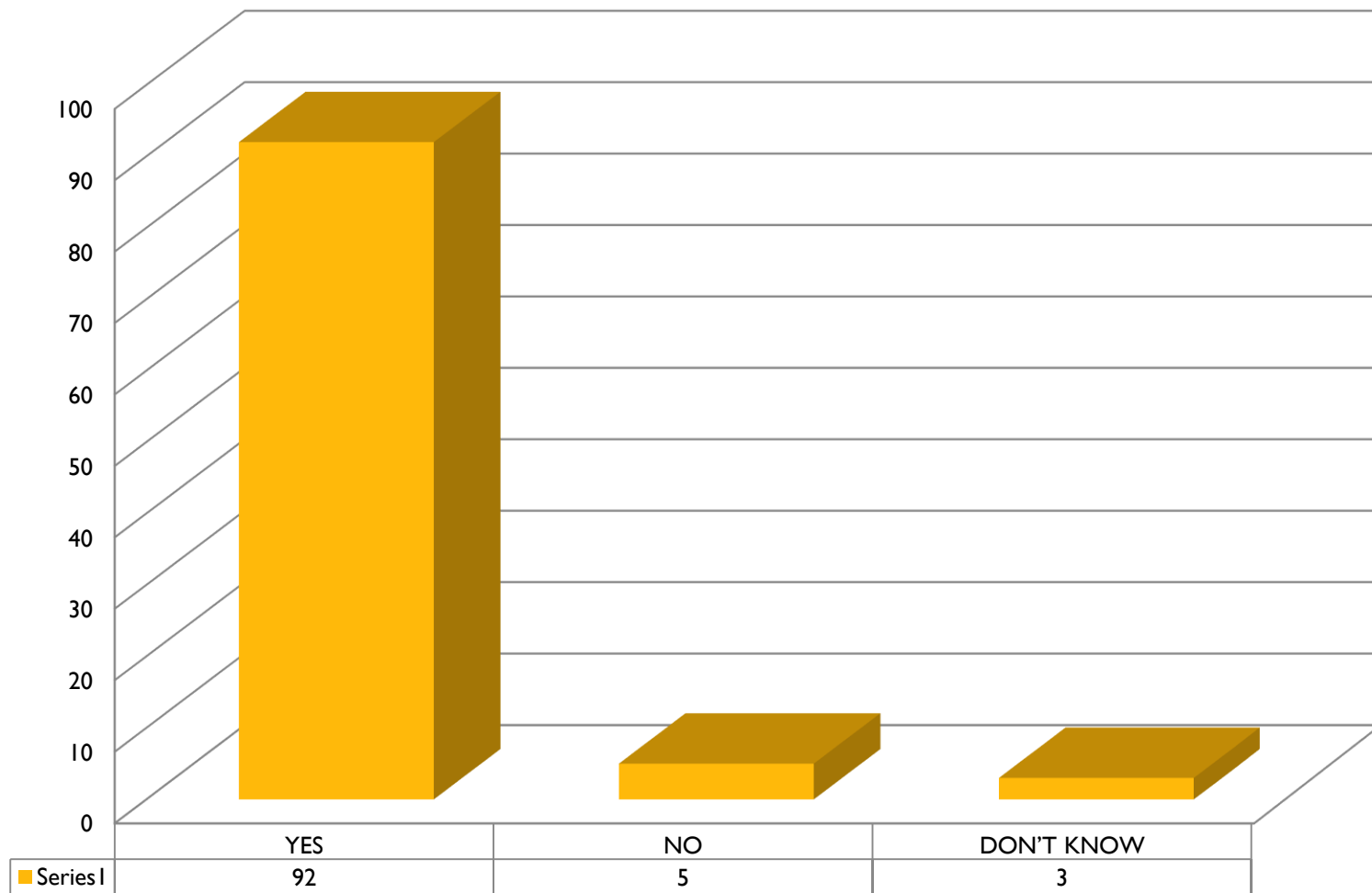
ANALYSIS (NURSE):

OCCURENCE OF NOSOCOMIAL INFECTION



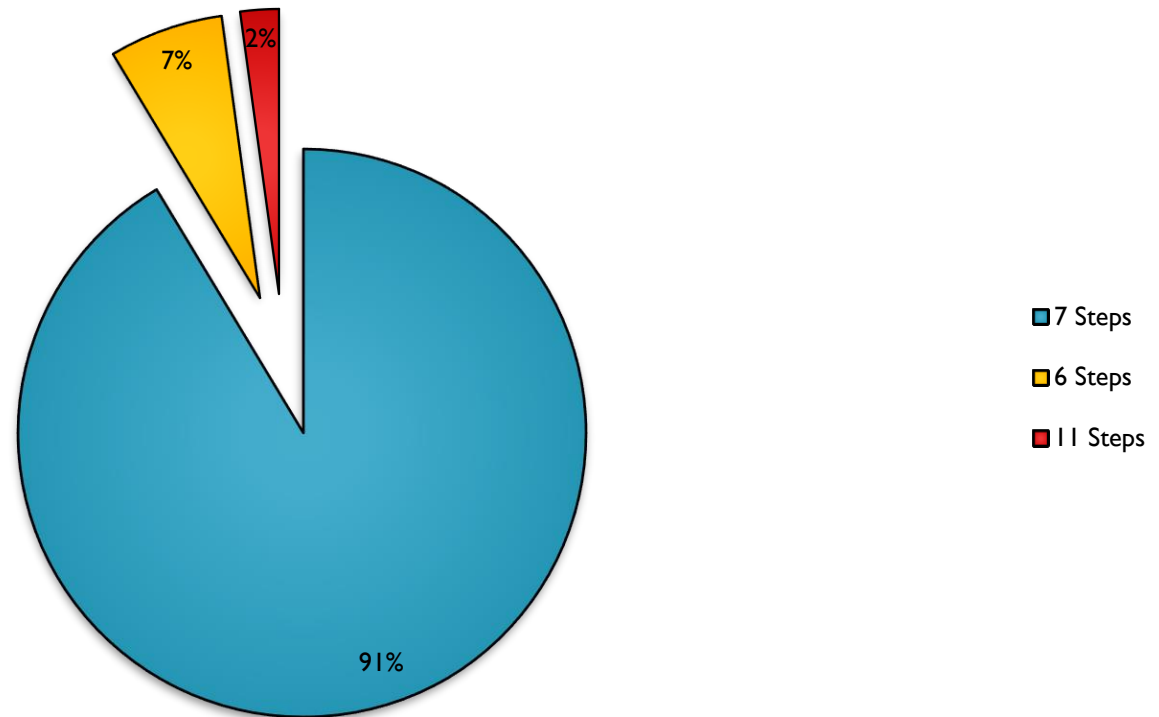
INFERENCE: The figure reveals that 65% of the Nurses agreed that all the nosocomial infections such as Ventilator Associated Pneumonia(VAP), Methicillin Resistant Staphylococcus aureus (MRSA), Catheter Associated Urinary Tract Infection (CAUTI), Center Line Associated Blood Stream Infections (CLABSI) occur at Sarvodaya Hospital.

AWARENESS REGARDING THE POLICY



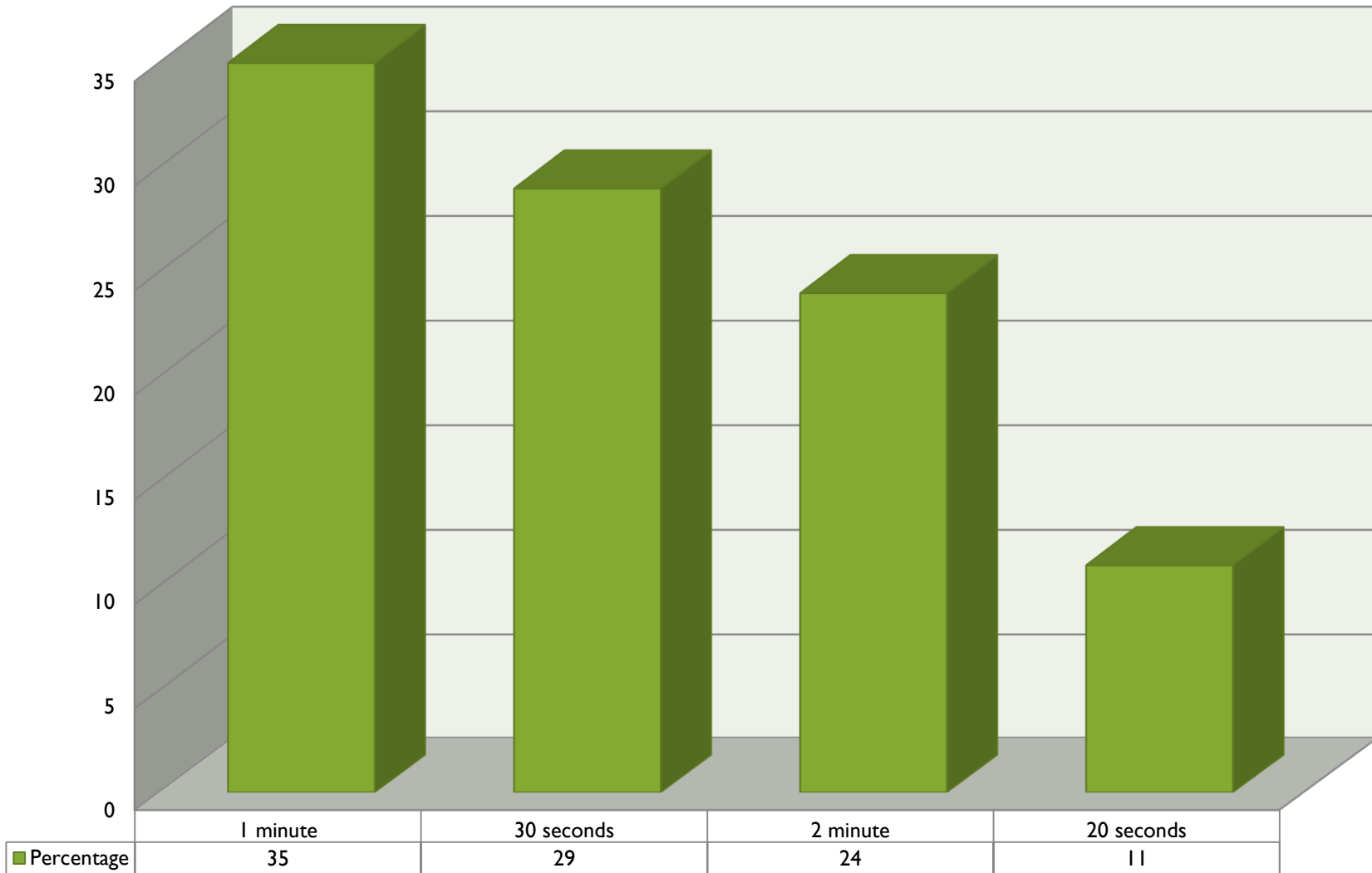
INFERENCE: The figure depicts that **92%** of the Intensive Care Units are aware about the policy regarding Nosocomial Infection in the Hospital.

Awareness regarding the steps in Hand washing



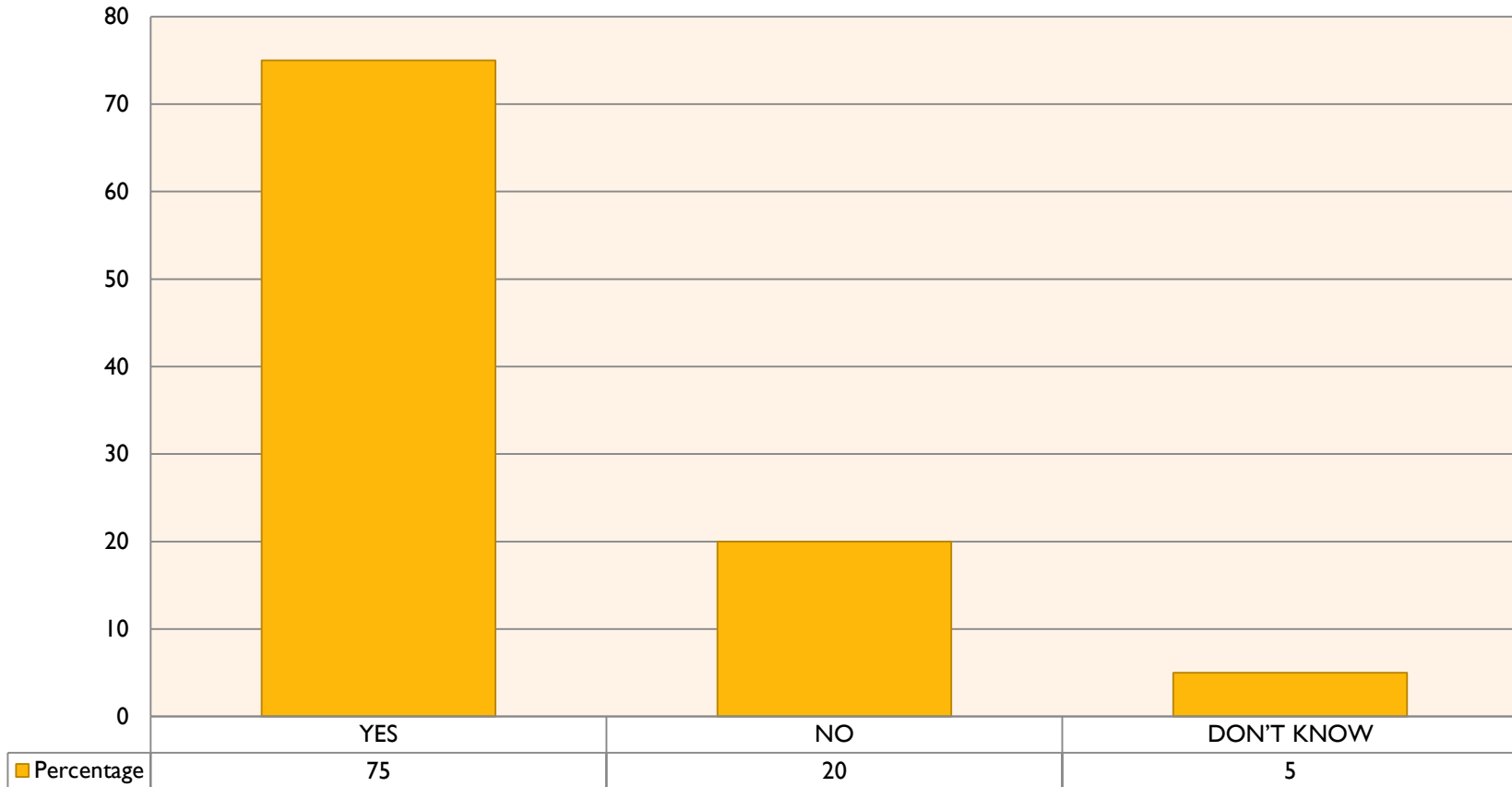
INFERENCE: The figure clearly shows that **91%** of the Intensive Care Unit Nurses are aware of the 7 steps followed in Hand Washing Practices. **7%** Nurses feel there are 6 steps followed by 5% who feel there are 11 steps..

Ideal time for Hand Washing



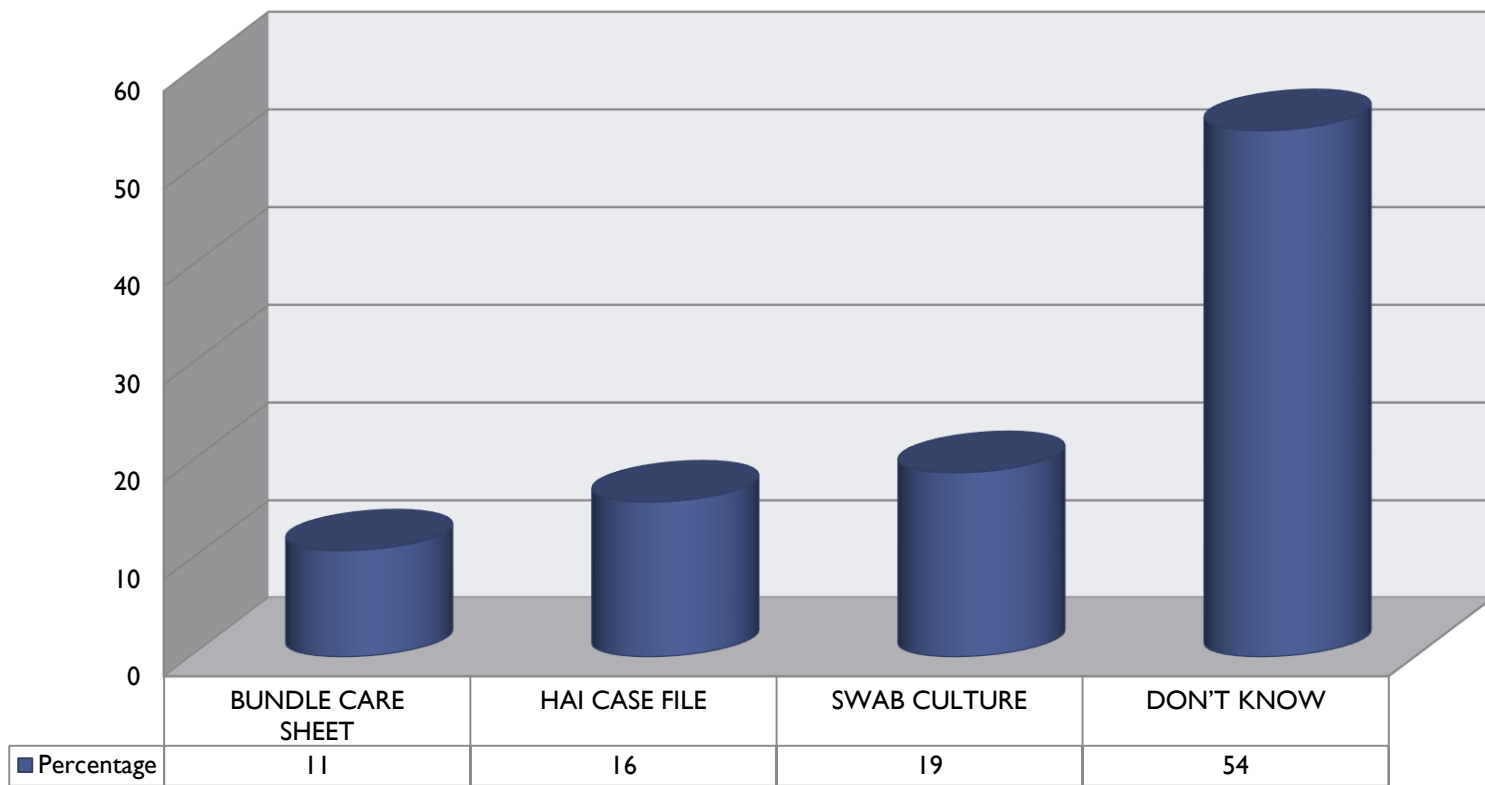
. **INFERENCE:** The figure clearly depicts that **35%** of the Intensive Care Unit Nurses knew about the ideal time followed by **29%** who feel 30 seconds to be the ideal time followed by **24%** who feel 2 minute to be the ideal time.

Awareness of surveillance system for Nosocomial Infection



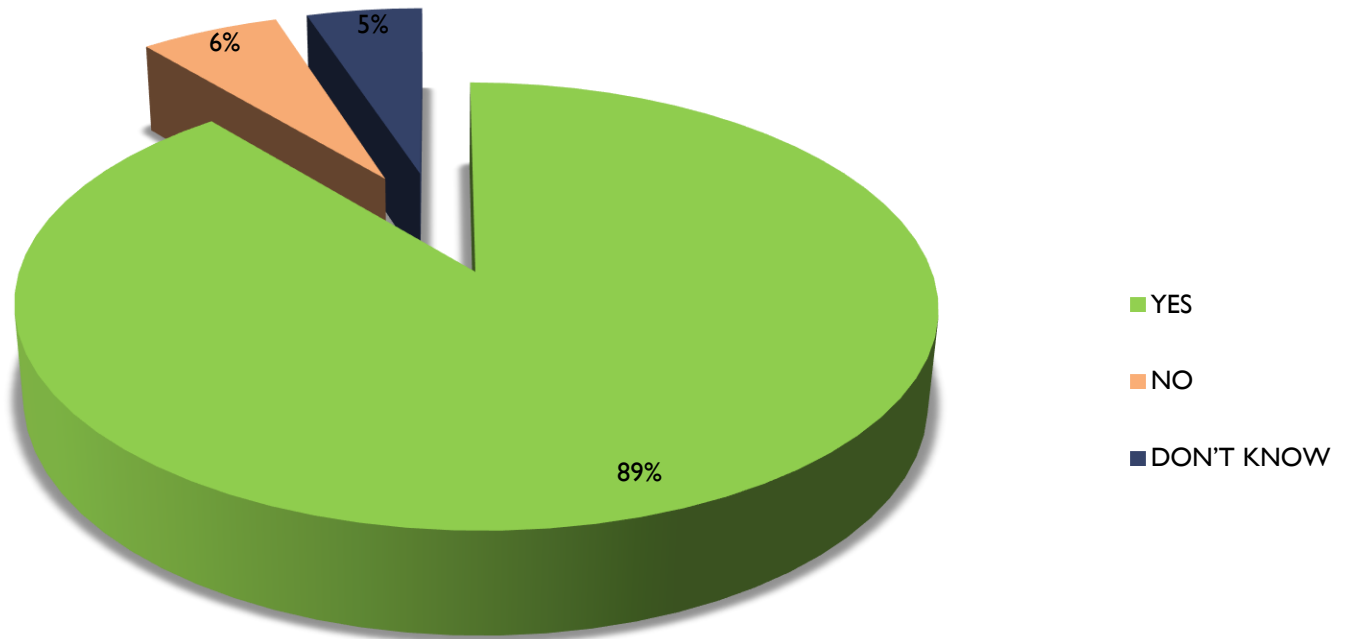
INFERENCE: The Figure clearly shows that 75% of the Intensive Care Unit Nurses were aware about the surveillance system for nosocomial infections that monitors the incidence of nosocomial infections.

NAME OF THE SURVEILLANCE SYSTEM



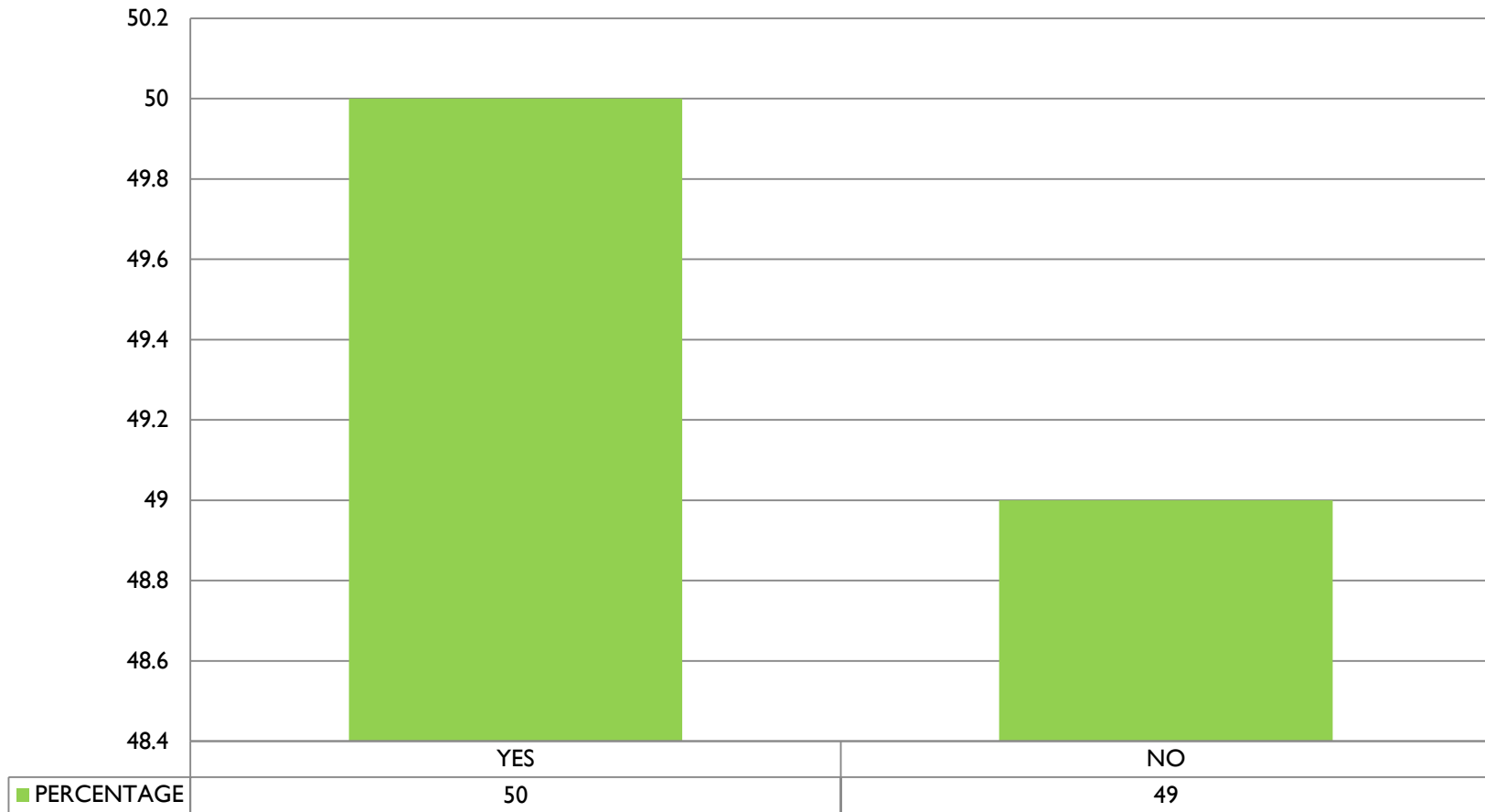
INFERENCE: The figure clearly shows that only 54 % of the Intensive Care Unit Nurses were not aware about the Surveillance System maintained by the Hospital followed by 19% who thinks that swab culture is one of the system.

Nurses Training for Nosocomial Infection



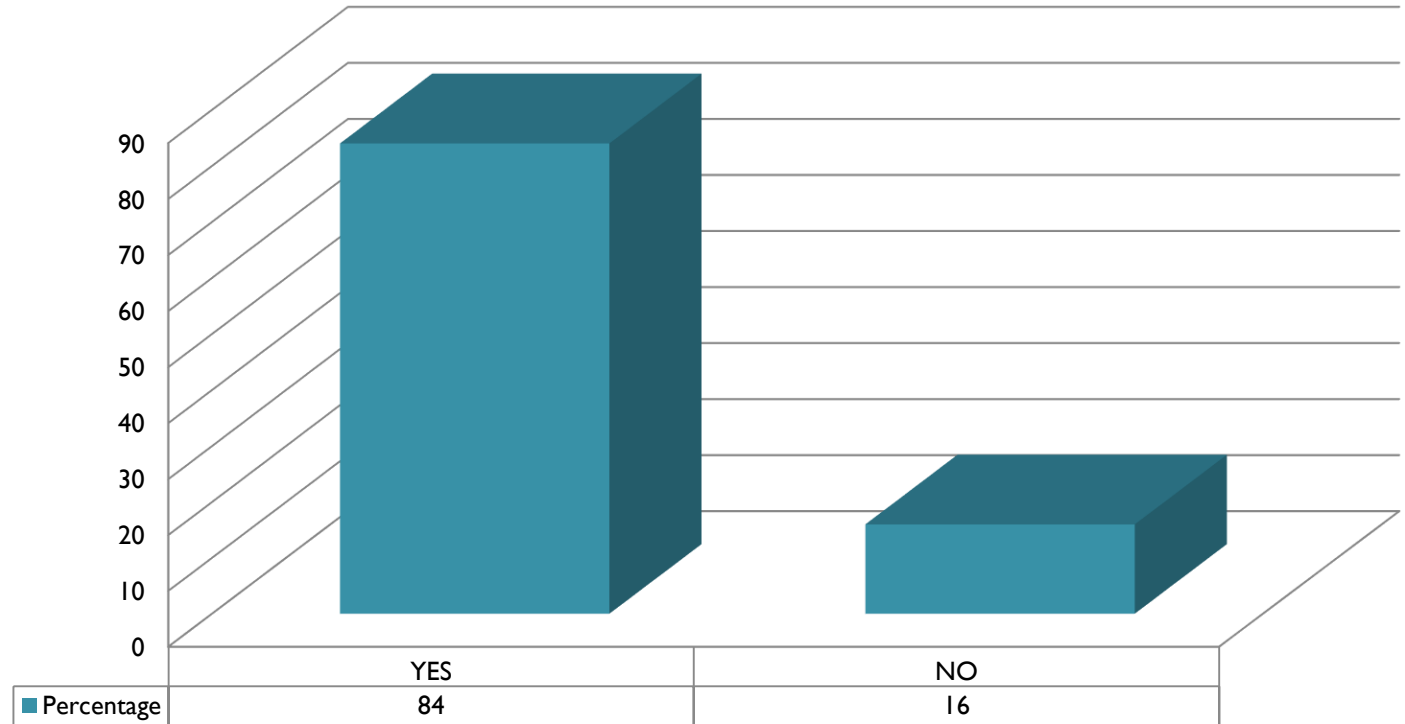
INFERENCE: The figure clearly reveals that 89% of the Intensive Care Unit Nurses agreed that they receive training for nosocomial infection.

Wearing Gloves Eliminates Hand Washing



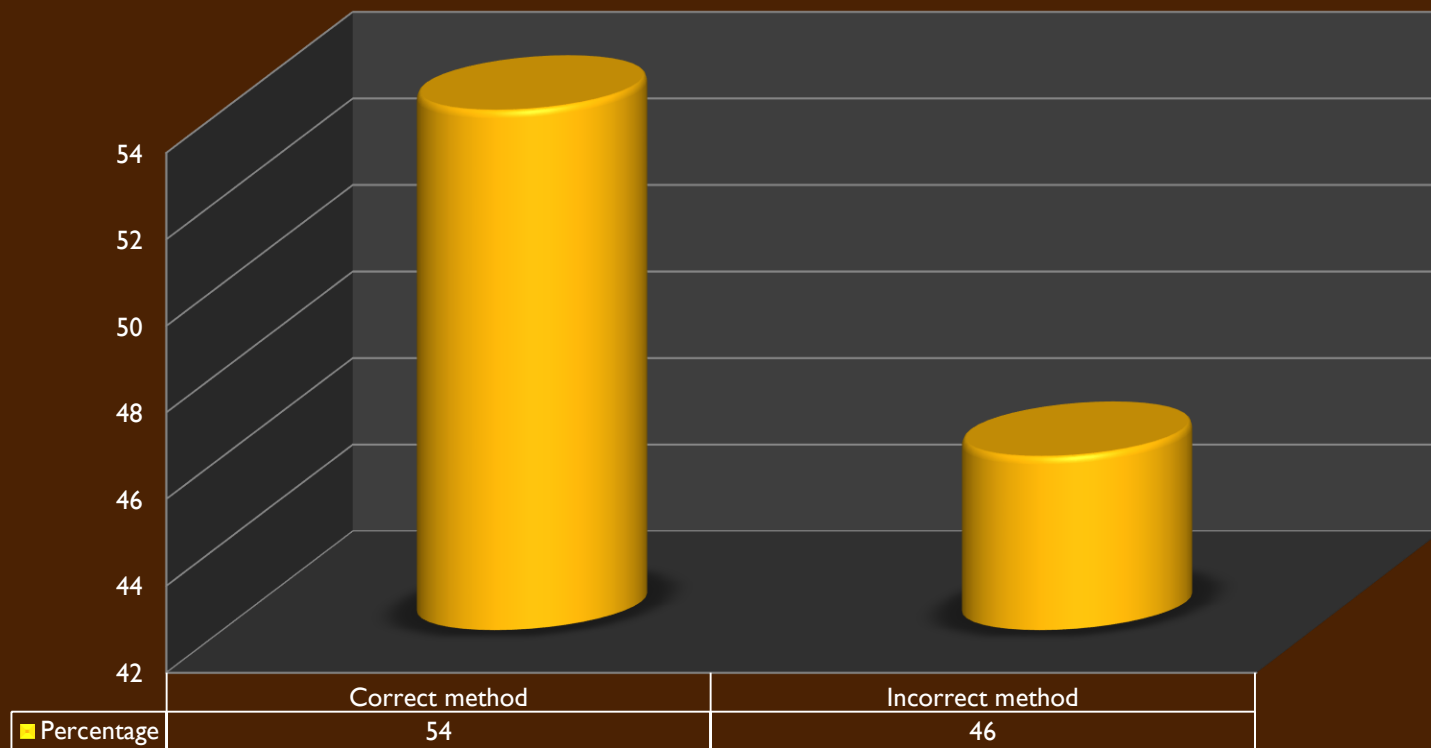
INFERENCE: The figure clearly shows that 50% of the Intensive Care Unit Nurses feel that if they wear gloves they do not need to wash hands and they will be safe from getting infected from nosocomial infections.

Regular Check- ups for Nurses Coming in contact with Infected Patients



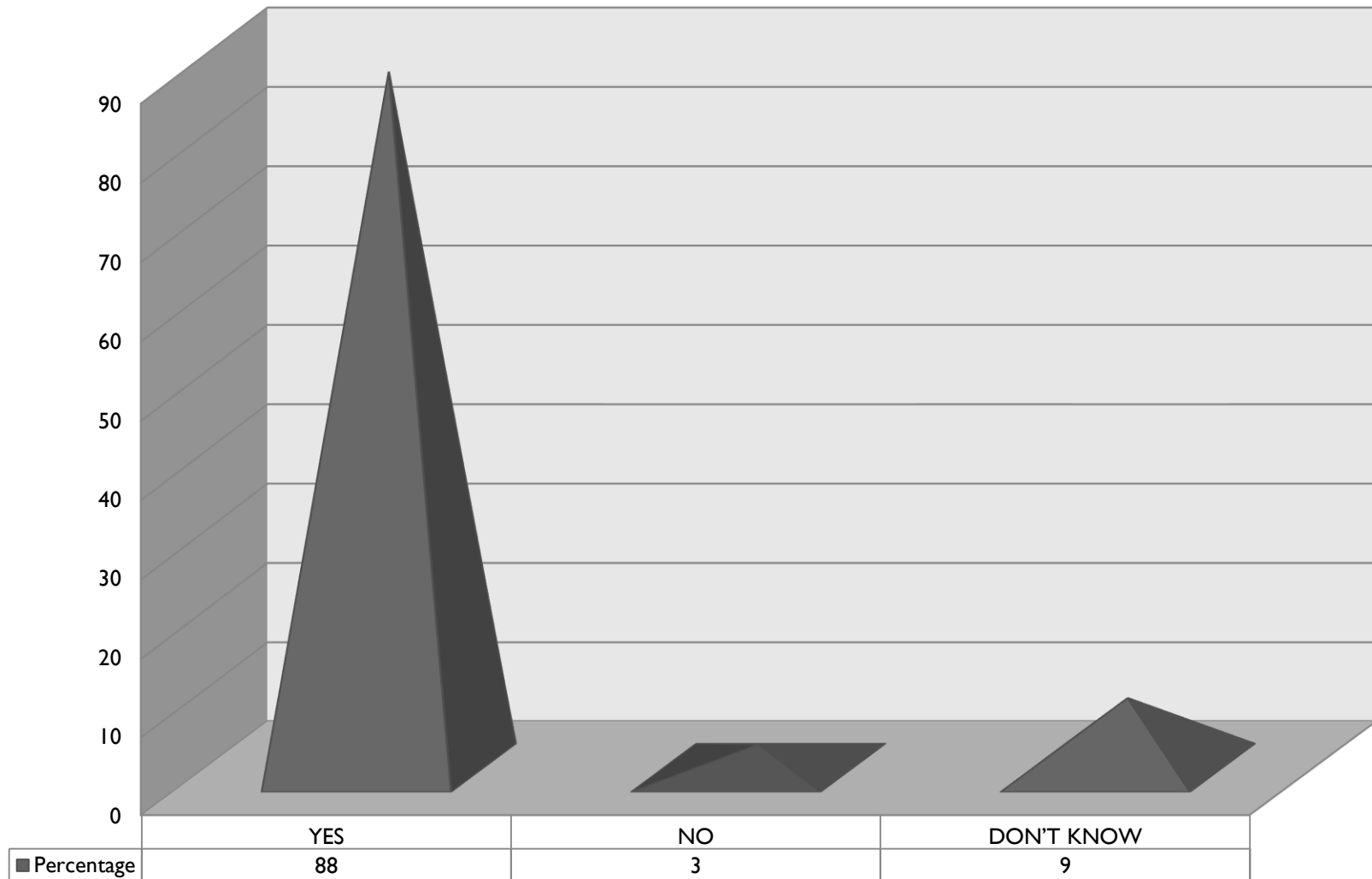
INFERENCE: The figure clearly reveals that 84% of the Intensive Care Unit Nurses said that they had regular checks ups after providing care to the infected patient whereas 16% nurses disagreed.

Standard Protocol of Wearing(Mask, Apron, Gloves, Head Cap)



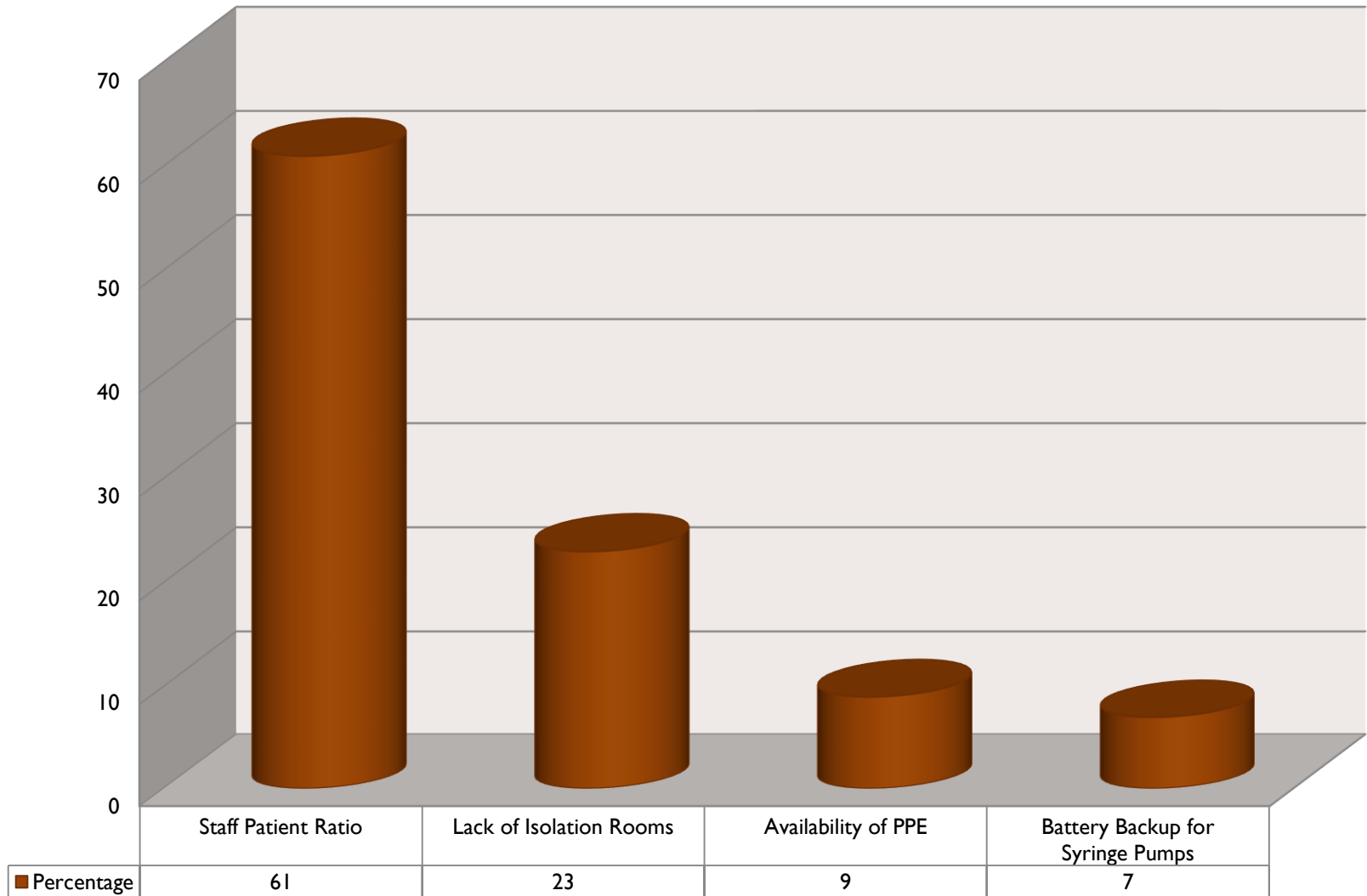
INFERENCE: The figure clearly shows us that Only 54% of the Intensive Care Unit Nurses knew about the standard protocol of wearing the Mask, Gloves, Apron & Head Cap and 46% nurses were unaware of the Standard Protocol.

Assessment of Effectiveness of Infection Control Training



INFERENCE: The figure shows that 88% of the Intensive Care Unit Nurses believe that there occurs assessment of effectiveness of Infection Control Training.

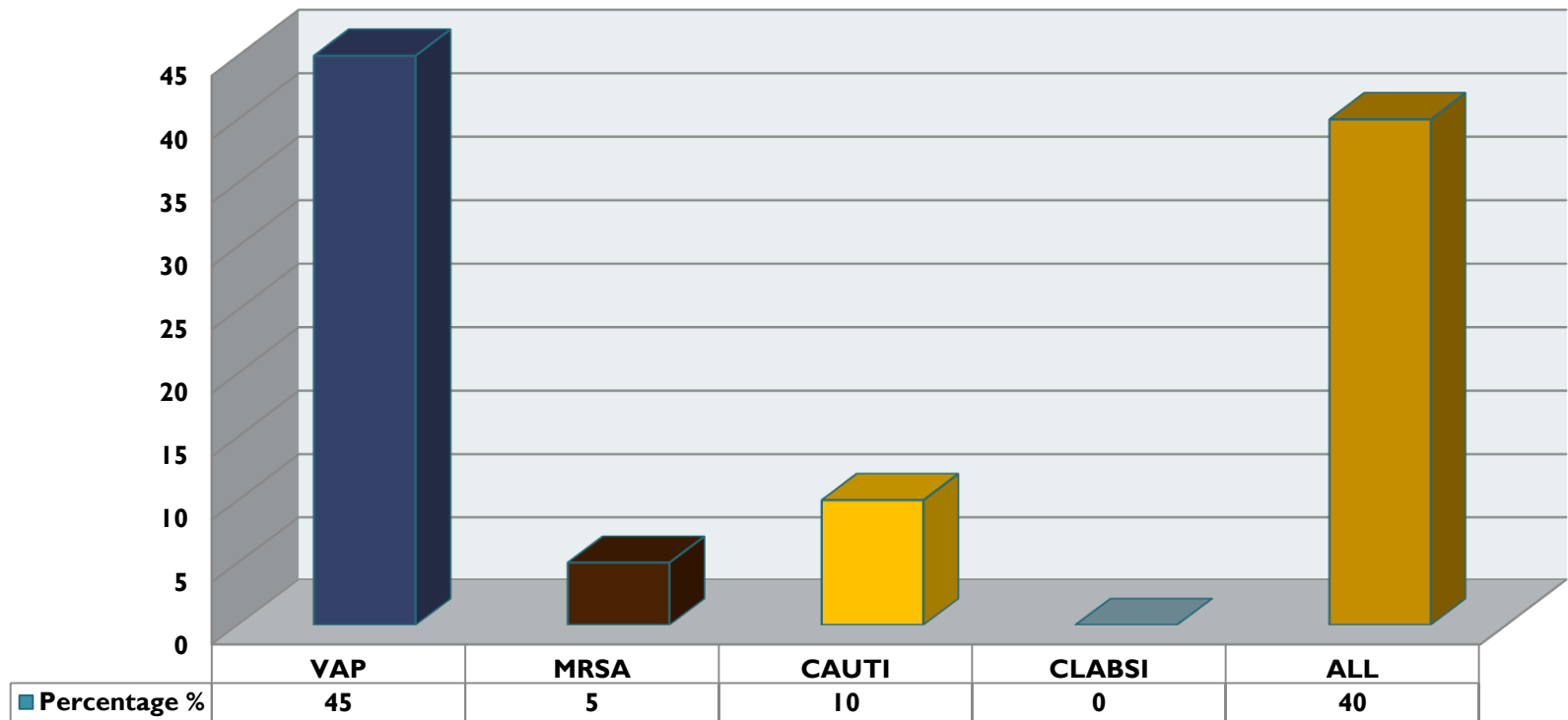
Most Encountered Challenge



INFERENCE: The Figure shows that 61% of the Intensive Care Unit Nurses feel the greatest challenge is of shortage of staff, 23% of the nurses feel that there is lack of isolation rooms and 9% feel there is no availability of Personal Protective Equipment (PPE)

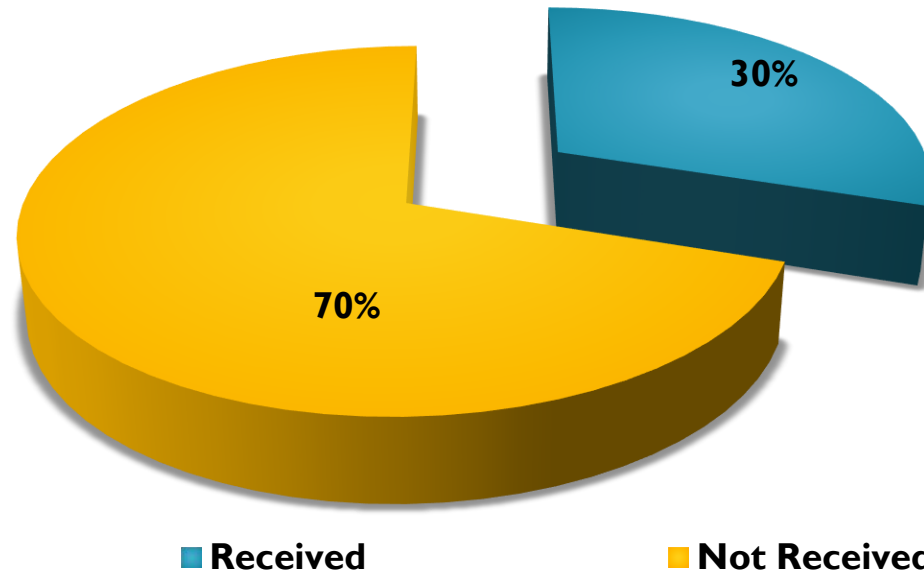
Analysis (Doctors):

Most Common Encountered Nosocomial Infection



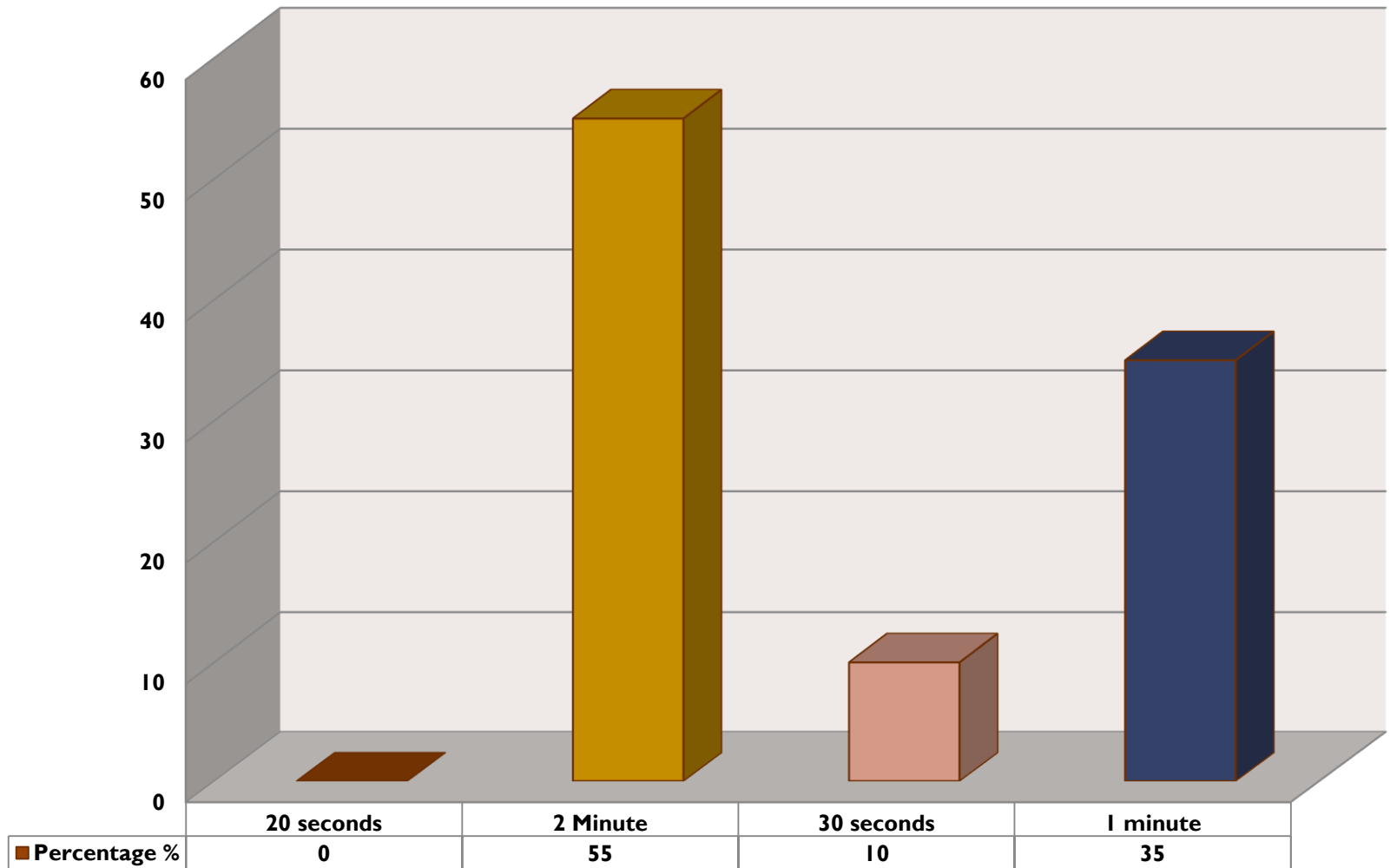
INFERENCE: The figure shows that 45% of the Physicians from Intensive Care Units feel that the most common Nosocomial Infection In Sarvodaya Hospital is Ventilator Associated Pneumonia.

Hand Hygiene Training



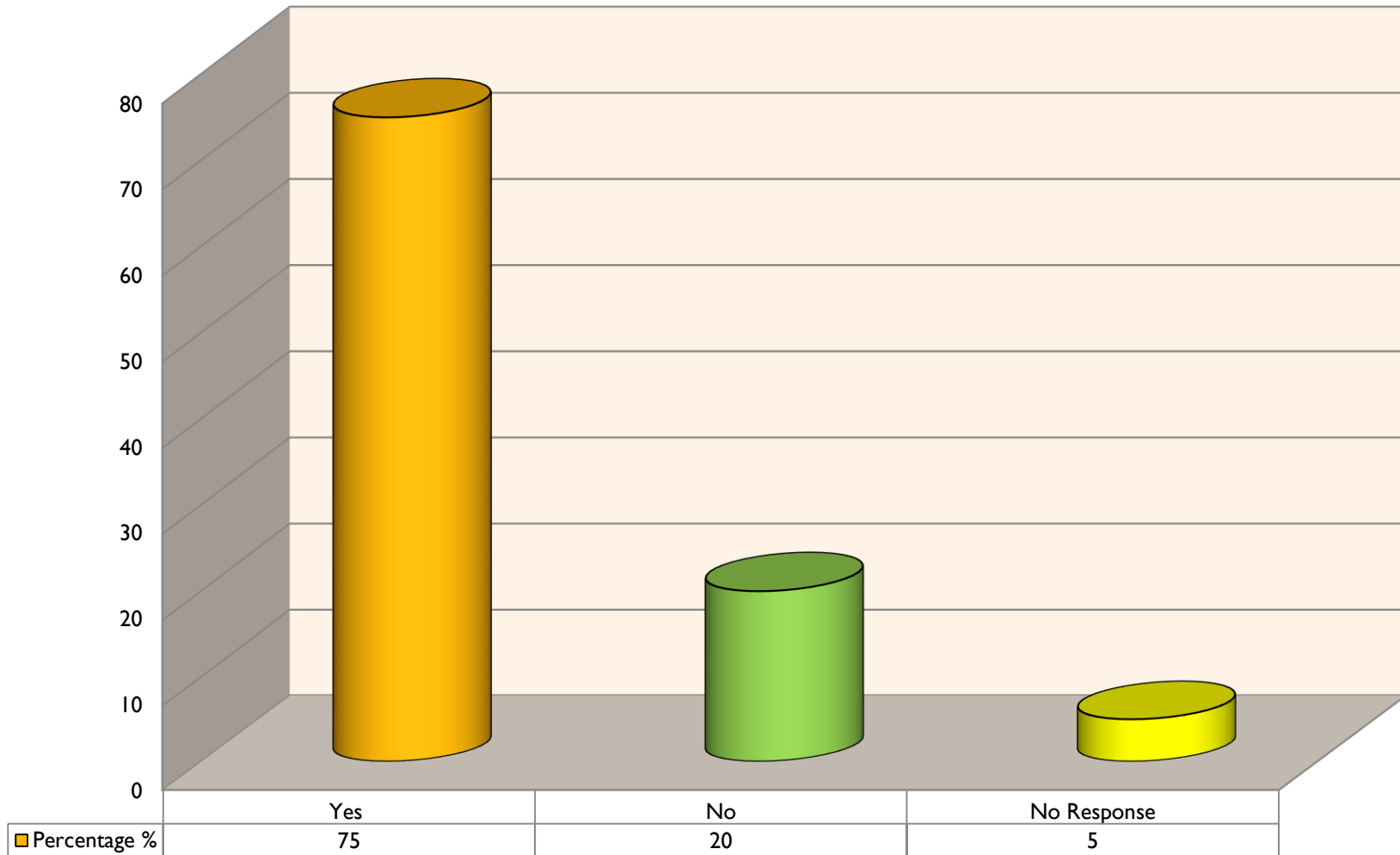
INFERENCE: The figure reveals that **70%** of the Physicians from Intensive Care Unit received a formal Hand Hygiene Training.

Ideal Time for Hand Washing



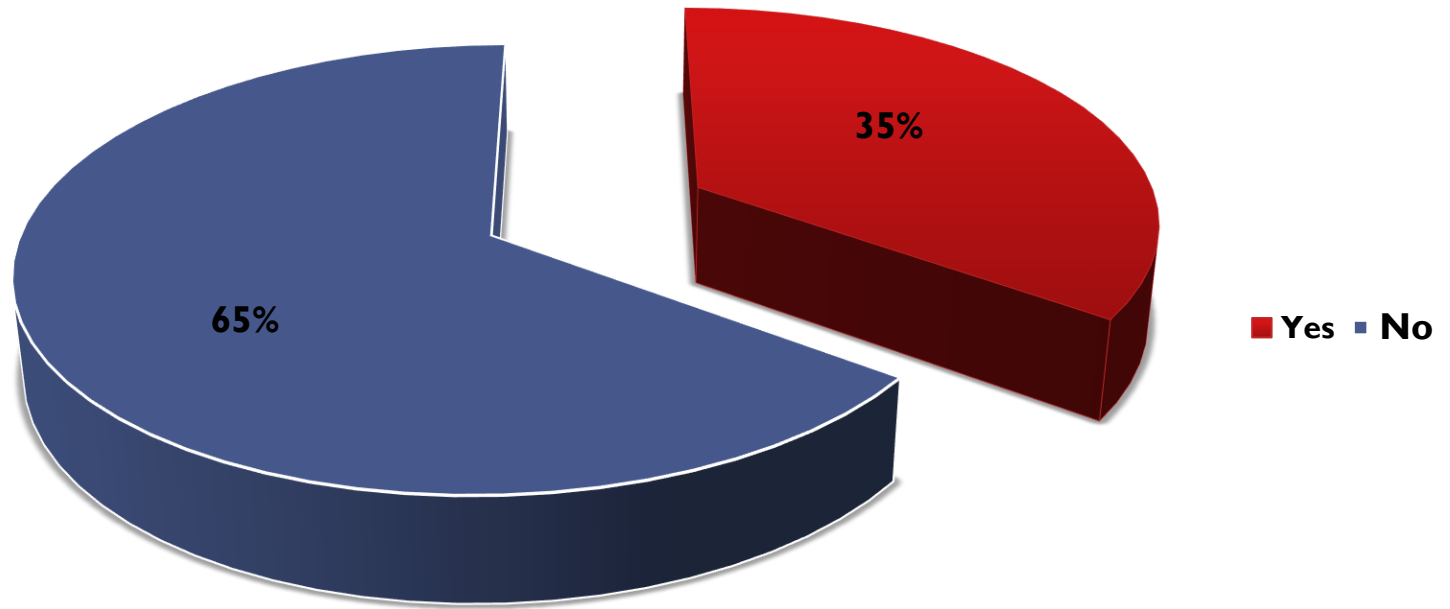
INFERENCE: The figure depicts that 55% of the Physicians from Intensive Care Unit feel that 2 minutes is the ideal time for Hand washing while 35% believe that 1 minute is the ideal time for washing hands.

Using PPE (Personal Protective Equipment)



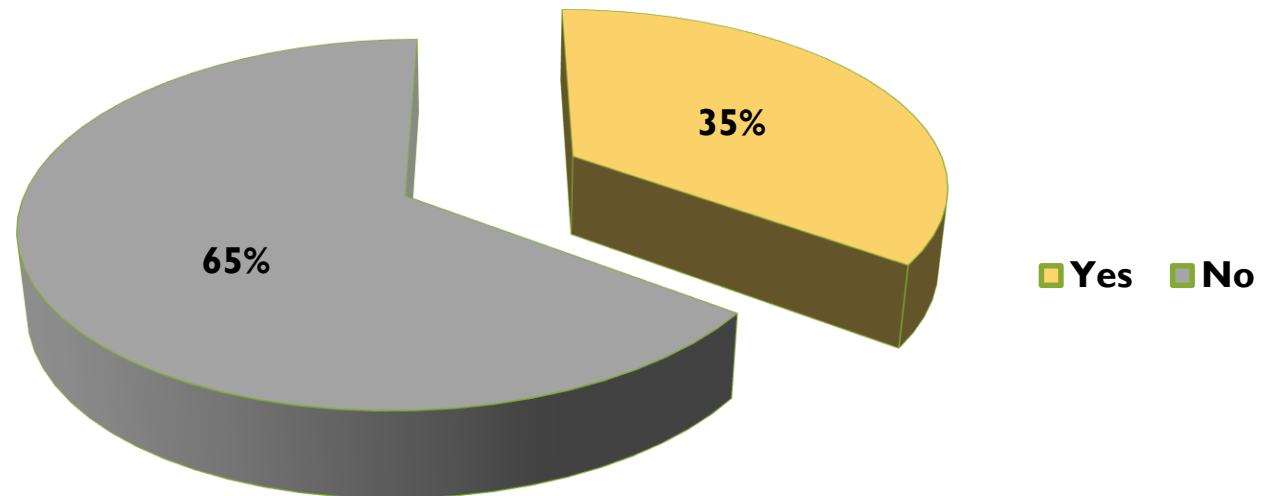
INFERENCE: The figure shows that **75%** of the Physicians from Intensive Care Unit use Personal Protective Equipment while treating Nosocomial Infected Patients.

Overburdening Hamper Hand Washing Practises



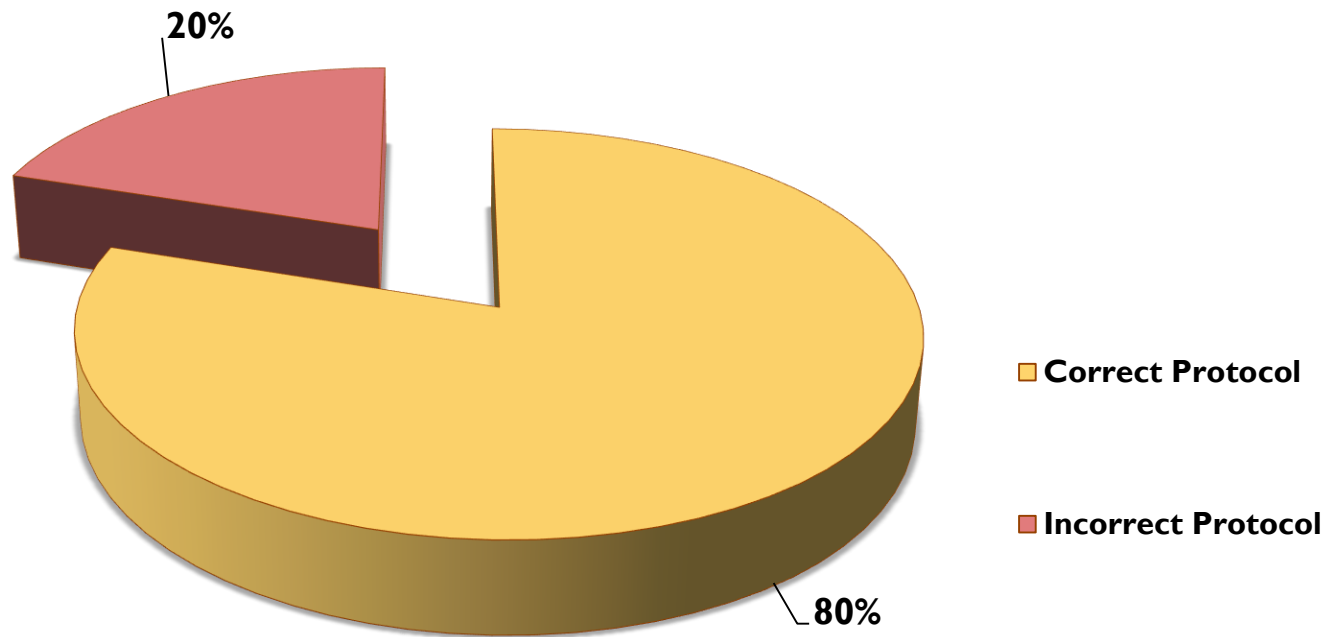
INFERENCE: The figure reveals that 35% of the Physicians from Intensive Care Unit feel overburdened by patients which hampers their Hand washing practices.

Physicians Checked Regularly for Nosocomial Infection



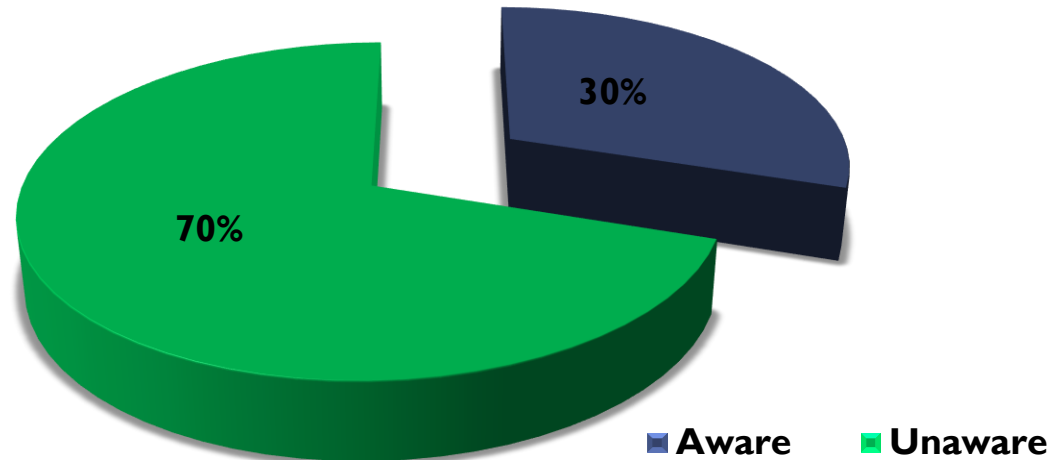
INFERENCE: The figure reveals that **65%** of the Physicians from Intensive Care Unit feel that they do not have regular health checkups after treating nosocomial infection patient.

Standard Protocols of Wearing (Headcap, Mask, Gloves, Apron)



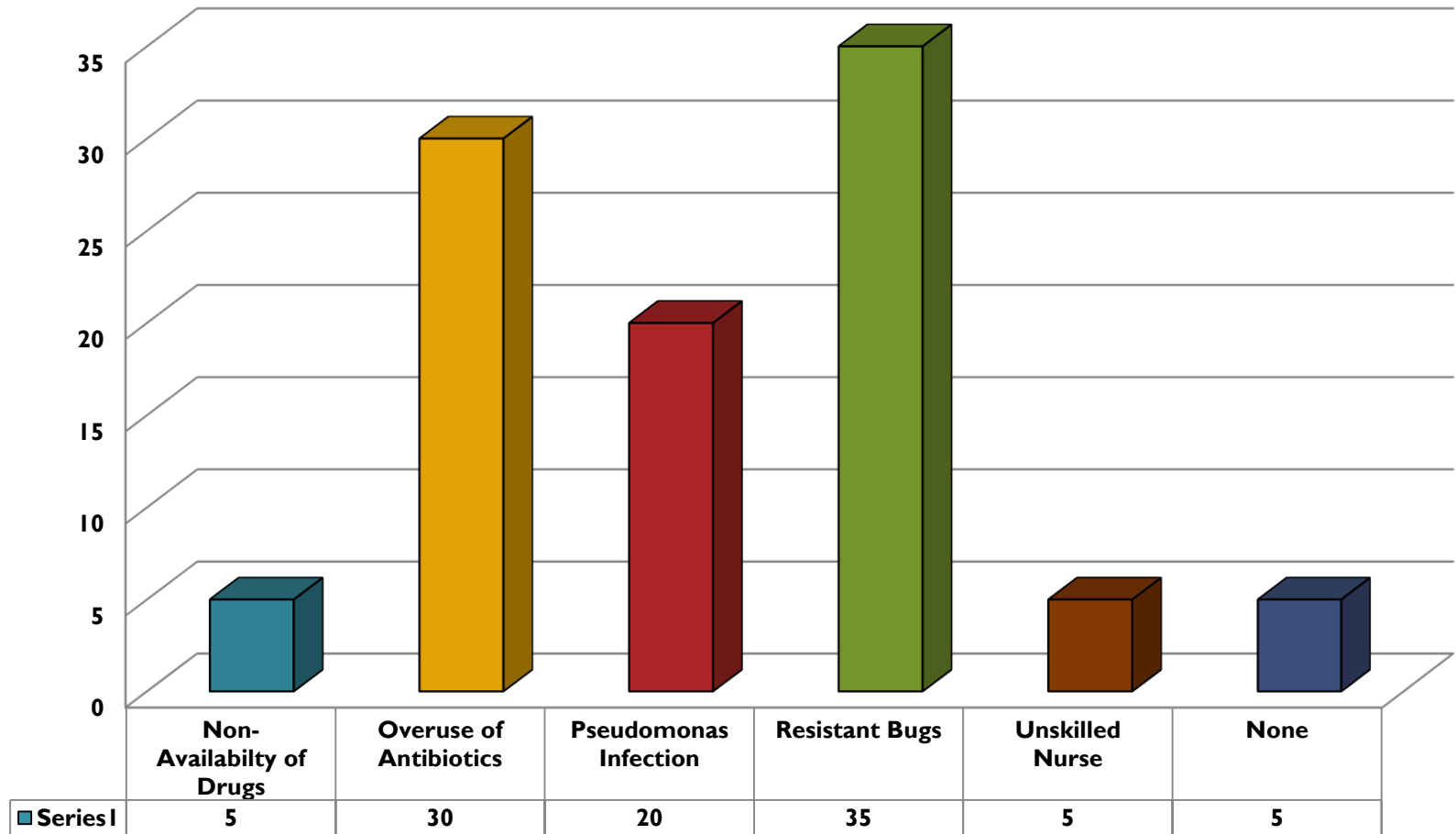
INFERENCE: The figure depicts that **80%** of the Physicians from Intensive Care Unit follow and know Standard Protocols of Wearing Head cap, Gloves, Mask & Apron.

Awareness Regarding Air Changes



INFERENCE: The figure shows us that **70%** of the Physicians from Intensive Care Unit were unable to recall the exact no of air changes required in the isolation rooms in the Intensive Care Units.

Challenges Encountered By Physicians



INFERENCE: The figure depicts that **80%** of the Physicians from Intensive Care Unit follow and know Standard Protocols of Wearing Head cap, Gloves, Mask & Apron.

CONCLUSION:

- The study revealed there is less awareness regarding the hand hygiene
- surveillance system of infection control
- standard protocols of wearing gloves, head cap, mask and apron.
- The awareness about infection control should also be developed among visitors.
- The awareness about the infection has to be created that will help in decrease of infections and control of the same.

RECOMMENDATIONS:

- Educate Doctors and Nurses about Hand Hygiene; regarding HAI and routes of transmission, barrier nursing , hospital waste management and importance of infection control team.
- The Nurses and Physicians of the particular department should be awarded and appraised creating competitiveness among others to perform well and win prize.
- Improving & Promoting staff education and accountability; conducting research to adapt and validate surveillance protocols followed in the hospital.
- There are only two infection control nurses. Employing more nurses for infection control team will minimize the work load of IC nurse, so that work is made effective.
- Staff patient ratio should be 1:1 for Ventillated patients.

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- Experienced and well trained staffs only should be allowed to treat “ISOLATED” patients. Adequate gloves, masks and disinfectants should be available. The usage must be monitored by infection control team.
 - There should be increase in knowledge regarding HAI and routes of transmission, barrier nursing and hand washing techniques, hospital waste management, and importance of infection control team.
 - Fumigation to be carried out at regular intervals of time.
 - There should be initial orientation for new staffs that includes staff from every department that has linkage to the ICU’s e.g. Housekeeping, Food & Beverage on infection control.
 - Complying with the Recommendations of the Antimicrobial Committee regarding the use of antibiotics.
 - There should be back up for syringe pumps and infusion pumps.
 - There is no fix timings of attendants.

REFERENCES:

- Centre for Disease Prevention and Control (CDC) and National Healthcare Safety Network (NHSN) <http://www.cdc.gov/nhsn/>
- WHO, Infection Control
- http://www.who.int/csr/bioriskreduction/infection_control/en/index.html
- Prevalence of Hospital Acquired Infections in a tertiary care hospital in India
- *Malhotra S, Sharma S, Hans C (Department of Microbiology, PGIMER and Dr RML Hospital) New Delhi.
- WHO/CDS/CSR/EPH/2002.12; Prevention of hospital-acquired infections
- A practical guide 2nd edition, World Health Organization, Department of Communicable Disease, Surveillance and Response
- WHO. Health care-associated infections. Fact sheet.
http://www.who.int/gpsc/country_work/gpsc_ccisc_fact_sheet_en.pdf
(accessed August 2012)