

**Sigma's 30th International Nursing Research Congress**  
**Knowledge and Use of Personal Protective Equipment Among Nurses in**  
**Teaching Hospital Wards, Enugu, Nigeria**

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**Purpose:** This study was conducted to ascertain the knowledge and use of personal protective equipment (PPE) among nurses in surgical and labour wards of the University of Nigeria Teaching Hospital, Enugu, Nigeria.

**Methods:** A descriptive design that involved description of the conditions as they existed without influencing opinions was used. The target population and study sample were a total of eighty-six (86) nurses working in the teaching hospital surgical and labour wards. The University of Nigeria Teaching Hospital is well patronized and caters for the health issues of majority of Enugu residents and about four (4) other nearby States of Abia, Anambra, Ebonyi and Imo, all in South Eastern Nigeria. Data was collected using a questionnaire and observation check list developed by the researchers. Content and face validity of the instruments were established while the reliability index was established using nurses in surgical wards of the nearby National Orthopaedic Hospital, also in Enugu and which was not the institution of the study. The reliability index yielded a Cronbach's Alpha of 0.89. Ethical clearance was obtained from the Ethics Committee of the Teaching Hospital, while verbal consent of the nurses was obtained before administration of the questionnaires and observation. Seventy – nine (92%) of the eighty six (86) questionnaires administered were returned. Data was analyzed using descriptive statistics of frequencies and percentages.

**Results:** The results revealed that the respondents comprised fourteen (14) males (17.7%, and sixty five (65) females (82.3%). Almost all the nurses (91.9%) had knowledge of personal protective equipment. The most commonly used of all PPE by these nurses as revealed by their responses were gloves (89.9%), followed by face masks (74.7%); gowns (51.9%), goggles (19%). From the observation using check lists, thirty one (31) of the nurses (39.2%) washed their hands before putting on gloves; while 48 (60.8%) did not wash their hands before putting on the gloves. Forty one (41) of them (51.9%) washed their hands after removing the gloves, while 38 (48.1%) did not. Sixty (60) of the nurses (75.9%) followed standard guidelines to remove used gloves, while 42 (53.2%) did not follow the standard guidelines. For the face masks, 16 (20.3%) of the nurses observed washed their hands before wearing face masks while 63 (79.9%) did not wash their hands; 43 nurses (54.4%) used the face mask for more than one patient. Thirty seven nurses (46.8%) followed standard guidelines for removing face masks while 42 (53.2%) did not follow the standard guidelines. The results revealed that knowledge of PPE did not translate to adequate use of PPE though 63 (79.7%) of the nurses indicated that training received on PPE made it easy to use PPE. Few nurses do not use PPE adequately. The most reported factor hindering the use of PPE was non availability and non accessibility of the equipment. Surprisingly, 68 (86.1%) of the nurses indicated lack of knowledge of the implications of not using PPE as factors that make it difficult for them to use protective equipment. The findings reveal that a lot of

efforts are still required to ensure that nurses comply with the use of PPE to protect themselves and their patients, and to guard against litigations for the health institution. **Conclusion:** The findings of this study reveal that infection prevention measures are yet to be fully embraced by nurses in surgical and labour wards of the University of Nigeria Teaching Hospital, Enugu, Nigeria. Many health workers in recent times have been exposed to infections that include HIV, HBV, HCV among many others, nurses in surgical wards stand greater exposure to pathogens. This study could serve as a basis for further studies in the same hospital after reorientation and training of the nurses on PPE, and other hospitals in Africa as a baseline to ascertain the use of PPE by nurses among other hospital workers. This study could open avenues for further research opportunities or links within Nigeria, West Africa and Africa on PPE and IPC practices. The study further recommended that the hospital authorities and occupational health nurses should take the lead roles to ensure adequate use of PPE in patient care.

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**Title:**

Knowledge and Use of Personal Protective Equipment Among Nurses in Teaching Hospital Wards, Enugu, Nigeria

**Keywords:**

Knowledge, nurses and personal protective equipment

**Abstract Summary:**

The study ascertained knowledge and use of personal protective equipment (PPE) among nurses in surgical and labour wards of teaching hospital in Enugu, Nigeria. The authors concluded that PPE are crucial to staff protection and recommended that employers and occupational health nurses should ensure adequate use of PPE in hospitals.

**Content Outline:**

Introduction: The study was on knowledge and use of personal protective equipment (PPE) by nurses on surgical and labour wards of the University of Nigeria Teaching Hospital, Enugu, Nigeria.

The study sought among others to;

- 1). ascertain the knowledge of personal protective equipment by nurses in two very busy units, surgical and labour wards of the hospital.
- 2). determine the various personal protective equipment used by nurses in surgical and labour wards of the hospital
- 3). ascertain adequate use of personal protective equipment by nurses in surgical and labour wards of the hospital

A total of eighty-six (86) nurses working in the teaching hospital surgical and labour wards,

which constituted the target population participated in the study. Data collection by the researchers was with the use of a questionnaire and an observation check list developed by the researchers, and whose content and face validity were checked and Cronbach's Alpha reliability index for the instrument was 0.89. Data was analyzed using descriptive statistics.

The results revealed that the respondents comprised fourteen (14) males (17.7%, and sixty five 65 females (82.3%). almost all the nurses (91.9%) had knowledge of personal protective equipment. The most commonly used of all PPE by these nurses as revealed by their responses were gloves. From the results of this study, knowledge of PPE did not translate to adequate use of PPE though 63 (79.7%) of the nurses indicated that training received on PPE made it easy to use PPE. Few nurses do not use PPE adequately. The most reported factor hindering the use of PPE was non availability and non accessibility of the equipment.es (89.9%), followed by face masks (74.7%); gowns (51.9%), goggles (19%). The findings reveal that a lot of efforts are still required to ensure that nurses comply with the use of PPE to protect themselves and their patients, and to guard against litigations for the health institution.

Conclusion:

The findings of this study reveal that infection prevention measures are yet to be fully embraced by nurses in surgical and labour wards of the University of Nigeria Teaching Hospital, Enugu, Nigeria. Many health workers in recent times have been exposed to infections that include HIV, HBV, HCV among many others and as highlighted by Gershon and Dejoy (2008), nurses in surgical wards stand greater exposure to pathogens. This study could serve as a basis for further studies in the same hospital after reorientation and training of the nurses on PPE, and other hospitals in Africa as a baseline to ascertain the use of PPE by nurses among other hospital workers.

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**Author Summary:** Dr. Chika G. Ugochukwu is a nurse, midwife, educator and researcher, Fellow, West African College of Nursing. Dr. Chika is actively involved in development, and support of other nurses and midwives through teaching, mentoring and networking. She was President, West African College of Nursing from 2011 -2013, and has been involved in the development of nursing and midwifery in Nigeria and West Africa. Chika is currently a Visiting Associate Professor at the University of Maiduguri, Nigeria.

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**Author Summary:** Ms. Nkiru Perpetua Onyejinaka was a student of the Department of Nursing Science, University of Nigeria Enugu Campus at the time of this study. Her keen sense of observation during the clinical experiences at the hospital was what led to the initiation and conduct of this study.