



## ORIGINAL RESEARCH

### Assessment of Information Communication Technology and eHealth Use Amongst Healthcare Providers in Selected Primary Health Centers in Kano, Nigeria

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## ABSTRACT

**Background:** Today, information and communication technologies (ICT) for health (eHealth) is the cornerstone of quality healthcare services. Majority of primary healthcare centres (PHCs) in developing countries experience limited applications of ICT.

**Objectives:** This study aimed to evaluate the application of ICT and basic eHealth competency among PHC providers in Nigeria.

**Methods:** The study was a cross-sectional survey among primary healthcare providers across five major local government areas (LGAs) in Kano state, Nigeria. A previously validated questionnaire on eHealth competency was adapted and administered to the respondents using convenience sampling. Multivariable logistic regression was used to determine predictors of eHealth competency using SPSS version 26.0. Ethical approval was obtained prior to commencement of the study.

**Results:** A total of 420 healthcare providers from thirty PHCs participated in the study. The respondents were mostly female 228 (54.3%) with mean age $\pm$ SD of 30.5 $\pm$ 4.2. ICT devices were reported to be inadequate 157 (37.4%). Challenges to adopting eHealth include unstable power 381 (90.7%) and limited internet access 243 (57.9%). Predictors of eHealth competency found were male gender (aOR, 3.12; 95% CI, 1.28 – 1.87;  $p=0.001$ ), and being a pharmacist (aOR, 2.49; 95% CI, 0.43 – 0.86;  $p=0.001$ ). Increasing years of experience was associated with decreased eHealth competency (aOR, 0.80; 95% CI, 0.34 – 0.92;  $p=0.011$ ).

**Conclusion:** ICT and eHealth applications were found to be inadequate in PHCs in Kano, Nigeria. The utilization of ICT facilities, particularly the internet, computers and phones to support quality care services were sub-optimal, necessitating timely facilities upgrade, funding and training.

**Keywords:** eHealth; ICTs; Computers; Internet; Primary healthcare; Nigeria