

## **ABSTRACT**

Nowadays the use of diagnostic imaging has increased dramatically over the past decade. Imaging technology is fascinating, is developing rapidly, and is without doubt beneficial, but there are also concerns about increase utilization and the risks of radiation. A hospital based cross-sectional descriptive study with the aims of determining the utilization and challenges of diagnostic imaging services in Thingangyun General Hospital was conducted from August to December, 2018. Data collection was done with face to face interview by using guidelines and secondary data analysis by reviewing of hospital registers and records from Radiology Department from January to December, 2017. Total numbers in utilization of imaging services of TGH in 2017 were 56,471 examination. The annual utilization of imaging services was increasing from 2013 (29,180) to 2017 (56,471). Most of the utilization was Digital Radiography examination 44.5% whereas the lowest utilization was Magnetic Resonance Imaging examination (0.5%). The most common utilization of special X-rays was Intravenous Urogram examination 66.4% and the lowest utilization was found for Barium meal (0.9%). Among the utilization of imaging services, 86.4% was utilized by inpatients and according to payment system, 81% of examinations were free of charges. Most utilization of services was from medical ward 24.2% whereas the lowest utilization in Physical Medicine Rehabilitation and Ear, Nose and Throat wards (0.02%). Majority of imaging services utilization were routine cases. Utilization of radiation monitor and personal protective measures are poor for both health care providers and patients. The main challenges on the utilization of diagnostic imaging services were inadequate human resources and increase workload, regular maintenance of machines, repeated use of investigation especially police cases and decrease patient satisfaction due to prolong waiting time for investigations and registration. The findings of this study could be used for planning to get effective management and improvement of diagnostic imaging services.