

Abstract of Master's Thesis

No.1

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Thesis Title	Electronic HIV patient registration system development using biometrics technology - Analysis of health system intervention in 3 HIV treatment sites in Egypt		

Objective :

Egypt has low human immune deficiency virus (HIV) prevalence among general population (<0.02%). The process of registration for people living with HIV/AIDS (PLHA) is paper-based. Egyptian and international guidelines recommend the use of Electronic Medical Records (EMR) in health systems to ensure linkage and proper identification. This study explores the feasibility and limitations of implementing an electronic registration system for PLHA in Egypt using biometric identification device, named NAP_Egy system.

Method :

This study is a cross-sectional qualitative case study design. The study design included key informant interviews (KIIs) with system users (SUs), a focus group discussion (FGD) with decision makers (DMs), and statistical analysis of registered PLHA data. The registration process of patients took place from December 2016 to May 2017 in three public treatment sites (out of ten treatment sites in the country) in Alexandria, Giza, and Gharbia governorates.

Result :

In KIIs, SUs reported acceptability to use NAP_Egy system and that PLHA did not show resistance for using the biometric device and NAP_Egy system. The biometric device was effective for searching registered PLHA profiles during the follow-up visits. DMs in the FGD focused on sustainability as a major pillar for implementing the system on a national scale. Statistical Analysis shows that the median age for registered PLHA on Antiretroviral Therapy (ART) was 37 years (P-value <0.001) (95%CI: 31-57 years) compared to the median age of the general population of Egypt (23.8. years).

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<p>Among registered PLHA, males represented 69.7% while females represented 30.3%. Among unmarried PLHA, there is increased risk of having infection with HIV in singles males with Relative Risk Ratio (RRR) 17 times more than females (P-value: <0.001 – 95% CI: 5 – 58). While there was an increase of risk of having infection with HIV in widowed females with RRR nine times more than males (P-value: 0.001, 95%CI: 2 – 33).</p> <p>Conclusion :</p> <p>KIIs show advantages of introducing NAP_Egy system is monitoring ART for newly registered PLHA in spite of the presence of more time to enter data for the first time. FGD elaborates the importance of building the infrastructure, information technology (IT) capacity, human resources (HR) capacity, and sustainable fund to ensure NAP_Egy system sustainability. Statistical analysis raises the demand for more researches to explore the marital status of PLHA in Egypt.</p> <p>Although this study was conducted in three treatment sites, NAP_Egy system was accepted to use by SUs, DMs and PLHA with the need to develop more functions in the system and upload all data of PLHA registered in National AIDS Program (NAP) registries. Data entry trainings for SUs are essential to overcome the registration time factor. Statistical analysis raises the need for more researches and studies to examine factors and causes of widowed and single distributions among PLHA. In conclusion, NAP_Egy system is accepted to be implemented on a national scale after overcoming limitations, adding more functions, and implementing more data entry trainings for SUs.</p>			