Information Technology (IT)-Enabled Epidemiological Applications for Improving Universal Health Coverage: A Case Study from North India

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Background: Universal Health Coverage is difficult to achieve in slum populations because of the inherent problems related to migration, poor living condition and inaccessibility to quality healthcare.

Methodology: An Information Technology (IT) based patient centric health information system was developed in a health centre providing healthcare to slum population. The Integrated Health Information System (IHIS) was used to prepare electronic family folder, follow-up individuals with chronic conditions, ensuring continuity of care, and identify gaps in the health services.

Multipronged approach was used to reach out to the patients in the community which involved using SMS services for appointment reminders & targeted health education and generating work-plans of due services for the healthcare providers.

Results: The IHIS helped in determining the epidemiologic profile, monitoring health trends and identifying service gaps. Records of 4500 households and 20,000 individuals are being maintained in IHIS. The system is used to follow-up hypertensive, diabetic, and tuberculosis patients on treatment. The system can effectively track antenatal, postnatal cases and children for due health services. Real time surveillance of communicable diseases can be done.

Conclusions: Use of IHIS format can be an effective tool to epidemiological profiling, identify gaps in services and ensuring equitable access to healthcare in slum population.

Keywords: Universal Health Coverage, Slum population, Information Technology, Patient centric system.