

## Automated HIV screening in the emergency department –earlier diagnosis, improved clinical outcomes

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### Background:

HIV/AIDS is a public health problem worldwide because undiagnosed patients maintain onward transmission. To stop viral transmission an upscale in diagnostics is needed so that more patients start treatment; patients on treatment and with undetectable viral load do not transmit the virus to other persons (“Treatment as Prevention”).

### Objectives:

We aimed at identifying more HIV infections in the emergency Department (ED) and at doing so earlier in the course of disease.

### Methods:

we designed an automated and clinician independent HIV screening project in the ED. Electronic Medical Record (EMR) automatically generates a request for HIV antibody (HIV Ab) test when a patient: a) is 18-65 years of age and has a request for any blood test; b) is not identified in the EMR as being HIV infected; c) does not have an HIV Ab in the EMR in the previous year. Nursing staff receive a visual warning of patients’ eligibility for screening and an extra tube label is printed out for HIV testing. The patient is informed of

screening at the moment of blood drawing and an <<opt-out>> strategy is applied (optional verbal informed consent or <<opt-out>> of screening).

**Results:**

In 16 months, a total of 21.487 people were eligible for screening. 18.072 HIV Ab screening tests were done. The opt-out rate was 6.3% and there were 44 new HIV diagnostics (prevalence rate 0.24%). Late presenting patients (baseline CD4 counts <350) dropped from an average of 56% in the previous 6 years at our institution to 36.3%. Median CD4 count at diagnostics went up from 192 to 388 cells/mm<sup>3</sup>.

**Conclusions:**

An automated and clinician independent HIV screening program in the ED proved to be successful at identifying more HIV patients and at tackling the problem of late presentation. Diagnosing early in the course of infection is beneficial for the individual patient, but also represents a gain in general public health because onward transmission is stopped by starting antiretroviral treatment.

**Key messages:**

- Early diagnosis through universal screening.
- Treatment as prevention.