



Evaluation of routine human immunodeficiency virus (HIV) testing in emergency departments (EDs) in Interior Health, British Columbia, Canada: 2018-2022

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Abstract

Background: Routine, non-targeted HIV screening conducted in EDs is an emerging tool used sporadically around the world for HIV case identification. ED screening can help identify new HIV infections earlier, decrease HIV-associated morbidity, and prevent subsequent infections. The purpose of this evaluation was to understand the volume, impact, and effectiveness of the ED HIV screening program in Interior Health (IH), a regional health authority delivering health services to 830,000 people in British Columbia, Canada. **Population and Methods:** Between December 10, 2018, and January 31, 2022, IH implemented an HIV screening program across all 22 EDs in the region for ED patients requiring bloodwork. Descriptive analysis was conducted on HIV tests ordered to understand testing volumes and differences between EDs, and testing volumes were compared before, during, and after the program ran. A chart review was conducted for all new HIV cases identified in IH during the program period to abstract patient demographic characteristics, HIV testing history, and testing location. **Results:** A total of 140,654 HIV tests were conducted during the program, an average of 3,713 tests per month, equating to a 25-fold increase in ED testing compared to pre-program counts. The program was not implemented consistently across all EDs, with sites varying in the proportion of eligible ED visits that received testing, and variability of sites to implement a testing age limit (19-70 years old). The chart review found that 18 (81.8%) of the 22 new cases identified through EDs had no documented clinical indication for testing. These cases were mostly male (68.2%), between 30-39 years old (33.3%), and lived in rural communities with less than 10,000 people (50.0%). The majority (61.1%) of these cases had no known previous HIV tests. **Conclusion:** Routine, non-targeted HIV screening in EDs is a promising tool for identifying new HIV cases outside of conventional testing schemes and may help identify cases that would otherwise go undetected. Evaluation results will help influence the future of HIV testing in IH EDs as we seek to balance testing cost, supplies, and equitable access. Other jurisdictions may utilize these findings to develop ED testing programs to enhance timely, far-reaching case detection.

Palabras clave: HIV screening; program evaluation; emergency room visits; Canada.

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