A Comparison of Time Requirements for Targeted and Non-targeted Counselor-based Emergency Department HIV Screening

Michael S. Lyons, MD, MPH[1]; Nitin D. Ubhayakar, MD[2]; Kimberly W. Hart, MA[1]; Andrew H. Ruffner, MA, LSW[1]; Christopher J. Lindsell, PhD[1]; Alexander T. Trott, MD[1]; Carl J. Fichtenbaum, MD[3]

1-University of Cincinnati: Emergency Medicine; 2-University of Florida-Jacksonville: Emergency Medicine; 3-University of Cincinnati: Division of Infectious Diseases

UNIVERSITY OF Cincinnati

BACKGROUND

When considering the trade-offs between targeted and non-targeted HIV screening strategies, it is important to know how much time is spent looking for patients that meet eligibility criteria and how much time is allocated to testing itself under the two approaches.

OBJECTIVE

This study was designed to quantify the time spent in various component activities of HIV testing when using a targeted approach and when using a non-targeted approach.

We hypothesized that targeted screening would require more time per patient tested to select appropriate patients than would non-targeted screening.

METHODS

This was a time-and-motion study of a counselor-based HIV counseling and testing program in an urban, academic emergency department. During selected periods of time between June 2008 and September 2012, the program:

1. used conventional signed, opt-in consent
2. alternated between targeted and non-targeted patient selection
3. switched from conventional HIV assay with delayed result availability to rapid assay using an oral swab

During 33 six-hour observation periods, trained personnel recorded all counselor actions and timed them using a stop watch. Observed activities were coded and time spent on each activity was calculated.

- There were 17 non-targeted and 16 targeted periods of observation
- Conventional assay was used in 21 periods and rapid assay in 12 periods

RESULTS

There were 159 patients approached and 83 patients tested during observation periods. There were 61 different types of activity observed, which were grouped into 10 parent categories. The mean minutes spent per activity per patient *approached* for targeted and non-targeted screening was:

- patient selection and approach (9 v 9)
- introduction and testing offer (4 v 3)
- risk-assessment (3 v 2)
- pre-result counseling (1 v 1)
- post-result counseling (7 v 2)
- sample collection and assay (5 v 7)
- administrative and non-work activities (4 v 2)
- general clinical activities (16 v 15)
- data management and record keeping (14 v 7)

Table 1 Time Allocation per Task Stratified by Testing Strategy

	% of Time on Task		Mean Time (min) per *Tested* Patient	
	T*	NT#	T*	NT#
Patient Search/Approach/Selection	14.6%	19.1%	18	17
Search computer for who to test	5.1%	6.6%	6	12
Walking floor between rooms / searching for next patient	5.3%	7.0%	7	9
asking for / receiving referral from medical staff	2.1%	2.7%	3	4
Review bedside chart for who to test	1.1%	1.4%	1	3
Looking for / gathering stickers (logging approaches)	1.1%	1.4%	1	1
Check EIP data for prior testing on patients of interest	0.0%	0.0%	<1	2
Patient Offer/Introduction	6.2%	6.5%	8	6
Completing / filling out offer form (whether tested or not)	3.7%	3.9%	4	3
Consent	1.3%	1.4%	1	3
Introduction of counselor	0.8%	0.8%	1	2
Test offer	0.5%	0.5%	1	1
Assessment (tested patients)	4.1%	4.5%	5	4
Other risks / socio-economic status	1.4%	1.5%	2	2
Sex health / Partner history	1.0%	1.0%	1	2
Demographics, contact info, prior testing history	1.0%	1.1%	1	1
Substance use	0.8%	0.9%	1	1
Pre-result Counseling	1.5%	1.5%	2	1
Follow-up (includes follow-up paper work)	0.6%	0.9%	1	1
Risk reduction plan	0.3%	0.1%	<1	<1
Importance testing / repeat testing	0.2%	0.1%	<1	<1
Encouraging testing	0.1%	0.1%	<1	<1
Education	0.1%	0.2%	<1	<1
Partner selection / intervention	0.1%	0.1%	<1	<1
Skill building	0.1%	0.0%	<1	<1
Post-test counsel by phone (negative)[2]	11.7%	4.2%	15	4
Post-test counsel in person (negative)[3]	0.3%	0.1%	0	0
Assay	8.4%	15.1%	11	13
Sample Collection	4.6%	8.2%	6	17
Walking floor between room and lab for processing	2.9%	5.2%	4	5
Getting / replacing / disposing supplies	0.9%	1.7%	1	3
Result matching—placing results with testing chart	0.0%	0.0%	<1	<1

	% of Time on Task		Mean Time (min) per *Tested* Patient	
	T*	NT#	T*	NT#
General-Administrative / Non-work Related	6.0%	3.3%	8	3
Break/Restroom/Eating/Drinking	3.4%	2.1%	4	4
Coordinator direction/instructions/questions	0.7%	0.3%	1	<1
Personal activity— (e.g. reading, personal phone)	1.0%	0.4%	1	1
Clock-in/Clock-out	0.7%	0.3%	1	<1
Between counselor-staff communication[1]	0.2%	0.1%	<1	<1
Between counselor communication/coordination[1]	0.0%	0.1%	<1	<1
General-Clinical	25.8%	31.2%	33	28
Walking between offices/to and from offices and floor	11.5%	8.4%	15	14
Document in bedside chart	3.5%	6.7%	4	11
EIP related paperwork	1.2%	5.4%	2	9
Answering work phone/pager/checking voicemail	3.6%	1.7%	4	3
Waiting for patient (i.e. interrupted by staff / ED course)	1.2%	2.8%	1	5
Between counselor communication/coordination	2.1%	1.3%	3	2
Between counselor-staff communication	0.8%	1.9%	1	3
Gather info from medical record	1.1%	0.8%	1	1
Medical Delay	0.5%	0.7%	1	1
Washing hands	0.2%	0.7%	<1	1
Gather info from bedside chart	0.1%	0.4%	<1	1
Patient personal time	0.1%	0.2%	<1	<1
Assist patient (e.g. gather info, positioning bed, blankets)	0.1%	0.1%	<1	<1
Data Management/Records	21.4%	14.6%	27	13
Data entry-database	14.1%	6.6%	18	11
Gather /file / move paper	6.1%	5.1%	8	9
Double check paperwork / data entry	0.7%	1.4%	1	2
Photocopy Chart & interaction with medical records	0.0%	1.2%	<1	2
Coordinator communication / problem solve	0.5%	0.3%	1	<1

***T=Targeted. # Non-Targeted. [1] non-work related. [2] conventional assay. [3] rapid assay.**

CONCLUSION

There was no important difference between targeted and non-targeted screening strategies in terms of the amount of time required to select and approach the next patient.

This suggests that:

- individuals at-risk for HIV are rapidly identifiable in urban EDs
- cognitive and informational aspects of patient selection are not the primary components of the time required to approach patients for testing

Time required for targeting should not contribute to the controversy between targeted and non-targeted patient selection strategies.

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