Availability, Accessibility, Price of Rapid HIV Self-Tests, New York City Pharmacies, Summer 2013

Julie E. Myers, MD, MPH[1,2]; Olivia El-Sadr Davis[3]; Elliott R. Weinstein[3]; Molly Remch[3]; Amy Edelstein, MD[4]; Blayne H. Cutler, MD, PhD[1]; Julia A. Schillinger, MD, MSc[1,5]

[1]New York City Department of Health and Mental Hygiene, Queens, NY; [2]Department of Medicine, Division of Infectious Diseases, Columbia University Medical Center, New York, NY; [3]Health Research Training Program, New York City Department of Health and Mental Hygiene; [4]New York Medical College, Valhalla, NY; [5]Division of STD Prevention, US Centers for Disease Control and Prevention.

Contact: Julie Myers
jmyers@health.nyc.gov
347-396-7761

Abstract **#970**

Background

- The US FDA approved an over-the-counter, rapid HIV self-test for personal use in July 2012.[1]
- Self-testing offers convenience, and enables testing privately and anonymously.
- Self-testing offers opportunities to[2]:
  - Reach those unaware of their infection;
  - Facilitate more frequent testing of those at highest risk; and
  - Perform joint testing within a sexual partnership ("point-of-sex testing").
- Since October 2012, kits have been available in US pharmacies.[3]
- The manufacturer's suggested retail price (MSRP) is $39.99.[3]
- The public health impact of this product is not yet known.[4]

Objectives

- To assess the availability, accessibility, and price of rapid HIV self-tests in NYC.

Methods

Study design

- We conducted a cross-sectional, in-person survey in NYC pharmacies.

Sample

- Using HIV surveillance data, and a list of all NYC pharmacies, NYC pharmacies (n=2568) were assigned an HIV diagnosis rate based on the HIV diagnosis rate of the neighborhood in which the pharmacy was located. Pharmacies were then stratified into tertiles using HIV diagnosis rate.
- A random sample of 250 pharmacies was taken from the first tertile (high morbidity neighborhood [**HighMN**]) and third tertile (low morbidity neighborhood [**LowMN**]).
- Sampled pharmacies were considered ineligible for the survey if they were:
  - Closed during business hours;
  - Non-retail; or
  - More than a 10 minute walk from a subway station according to an online mapping program (except for Staten Island).

Data collection/measures

- During June-August, 2013, project staff visited each pharmacy and:
  - Observed whether it was an independent or a major chain pharmacy;
  - Asked a pharmacist/pharmacy technician about the rapid HIV self-test kit's availability/location; and
  - Visually inspected the pharmacy for kits.

Definitions

Availability: Rapid HIV self-test kit present in store on day of survey;

Accessibility: Doesn't require interaction with the pharmacist/pharmacy technician before purchase (i.e., not behind pharmacy counter; not locked in any way);

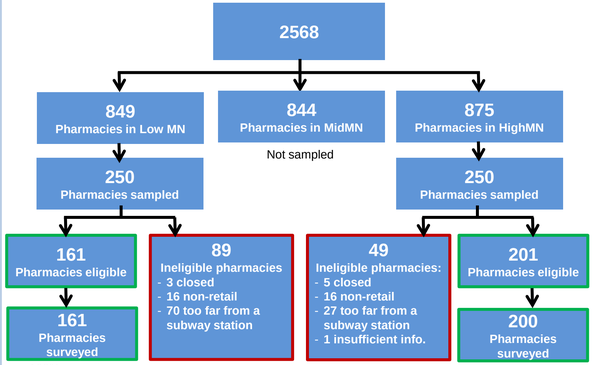
Price: Retail price on box/on shelf.

Analysis:

- We examined availability, accessibility, and price across:
  - High vs. low morbidity neighborhoods; and
  - Chain vs. independent pharmacies.
- We used the Chi-square test and the t-test (for dichotomous and continuous variables, respectively).

Results

Figure 1. Pharmacies Included in Sample.



LowMN, low morbidity neighborhoods; MidMN, middle morbidity neighborhoods; HighMN, high morbidity neighborhoods.

Key result:
- Of all NYC pharmacies (n=2568), 19% were sampled.
- >99% of eligible pharmacies in the sample were surveyed.

Table 1. Characteristics of surveyed pharmacies.

Characteristic	All (n=361) n	All (n=361) (%)	LowMN (n=161) n	LowMN (n=161) (%)	HighMN (n=200) n	HighMN (n=200) (%)
Pharmacy type						
Independent	276	76%	112	70%	164	82%
Chain*	85	24%	49	30%	36	18%
Neighborhood poverty level**						
0 to <10% (low poverty)	45	12%	39	24%	6	3%
10 to <20% (medium poverty)	138	38%	90	56%	48	24%
20 to <30% (high poverty)	91	25%	26	16%	65	33%
30 to 100% (very high poverty)	86	24%	6	4%	80	40%
HIV diagnostic rate (per 100,000) median (range)	47	(2,126)	14	(2,22)	62	(47,126)

*>50 locations in NYC.

**Proportion of neighborhood population living below federal poverty level.

Key result:
- The majority of pharmacies surveyed were independent pharmacies (across both LowMN and HighMN). .
- Pharmacies in LowMN were more likely to be chain pharmacies compared with pharmacies in HighMN (30% vs. 18%, respectively).

Table 2. Availability, Accessibility, and Price of the Rapid HIV Self-Test Kit in NYC Pharmacies in Low vs. High HIV Morbidity Neighborhoods (bivariate analysis).

Pharmacy Characteristic	All (n=361) n	All (n=361) (%)	LowMN (n=161) n	LowMN (n=161) (%)	HighMN (n=200) n	HighMN (n=200) (%)	P-value
Availability							
Product in the store	97	27%	49	30%	48	24%	0.1704
Product NOT in the store	264	73%	112	70%	152	76%	
Accessibility							
Product accessible	36	37%	20	41%	16	33%	0.4456
Product NOT accessible	325	63%	141	59%	184	67%	
Product behind counter	64	66%	27	55%	37	77%	0.0223
Product location*							
Visible behind pharmacy counter	39	40%	16	33%	23	48%	0.1253
In family planning aisle	27	28%	16	33%	11	23%	0.2847
Not visible behind pharmacy counter	25	26%	11	22%	14	29%	0.4495
In front of pharmacy counter	14	14%	6	12%	8	17%	0.5355
In home diagnostics aisle	9	9%	7	14%	2	4%	0.0859
Other (feminine hygiene, in showcase)	2	2%	1	2%	1	2%	0.9882
Price							
Price in USD median (range)	42.99 (32.99, 50.00)		42.00 (39.99, 49.99)		42.21 (32.99, 50.00)		0.6985
Price above MSRP	30	70%	38	61%	68	79%	0.0536

LowMN, low morbidity neighborhoods; HighMN, high morbidity neighborhoods; MSRP, manufacturer's suggested retail price.
*Not mutually exclusive (product could be in multiple locations).

Key result:
- Kits were available in 27% of pharmacies overall; availability did not differ by neighborhood strata.
- Pharmacies in HighMN were more likely to store the product behind the pharmacy counter compared with pharmacies in LowMN (77% vs. 55%, respectively).
- Kits were priced above MSRP in 70% of pharmacies overall; price did not differ by neighborhood strata.

Other observations

Chain vs. independent pharmacies
- Availability was greater in chain (vs. independent) pharmacies (84% vs. 9%, p<0.01).
- Accessibility was greater in chain (vs. independent) pharmacies (48% vs. 8%, p<0.01).
- Kits were more often in the family planning section in chains than independents (38% vs. 0%, p<0.01).

Observation of pharmacists
- In pharmacies that had kits available (n=97):
  - Pharmacists correctly stated availability (80%)
  - Pharmacists correctly identified kit location (88%)

Product observations
- Photo at top right shows a product lock system in place (which would require special assistance to purchase).
- Photo at bottom right shows a handwritten sign directing customers to pharmacist for assistance.

Limitations

- Exclusion of pharmacies >10 minute walk from a subway station may have introduced some bias, potentially limiting generalizability.
- Measurement of price may have been an overestimate if discounts were available at the time of purchase (e.g., coupons).
- Non-English-speaking pharmacists may not have understood questions about kit availability/location, leading to possible underestimation of pharmacist knowledge.
- Both availability and pharmacist awareness may have been affected by a concurrent marketing campaign by the manufacturer.

Discussion

- Approximately 1 year after FDA approval, rapid HIV self-test kits were available in less than one-third of pharmacies in LowMN and HighMN in NYC but in most chain pharmacies.
  - As only about 1 in 4 pharmacies citywide are chain pharmacies, the wide availability of the kits in chains was not sufficient to result in overall availability.
- Pharmacies in areas of greatest need for HIV prevention were more likely to require interaction with the pharmacist to obtain the kit; this creates a potential obstacle to purchase, particularly for young people.[5,6]
  - The finding of poor accessibility of HIV prevention tools in high burden neighborhoods is similar the findings of a similar study describing structural impediments to condom access in a high HIV-risk area (Bronx, NY).[7]
- Price was often set above MSRP and did not differ by neighborhood strata (or by chain vs. independent pharmacy type).
- To make the self-test kit a viable method for easy to access testing in HighMN, efforts are needed to encourage more pharmacies to carry them and display them more openly.

References

1. Food and Drug Administration (FDA). FDA approves first over-the-counter home-use rapid HIV test [press release] July 3 2012.
2. Myers JE, et al. Rapid HIV self-testing: long in coming but opportunities beckon. *AIDS.* 2013;27(11):1687-95.
3. OraSure Technologies. First and Only In-Home Rapid Oral HIV Test Now Available to Consumers Across the U.S. [press release], October 9, 2012.
4. Paltiel AD, Walensky RP. Home HIV testing: good news but not a game changer. *Ann Intern Med.* 2012;157(10):744-6.
5. Gebhardt WA et al. Preferences for condom placement in stores among young Dutch men and women: relationships with embarrassment and motives for having sex. *Sex Health.* 2012;9(3):233-9.
6. Wilkinson TA et al. "I'll See What I Can Do": What Adolescents Experience When Requesting Emergency Contraception. *J Adolesc Health. 2014;54(1):14-9.*
7. Rizkalla C at al. Structural impediments to condom access in a High HIV/STI-risk area. *J Environ Public Health.* 2010;2010:630762.