



Quality Improvements in a State HIV Testing Program – Wisconsin, 2010–2014

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BACKGROUND

The effectiveness of HIV testing programs is evaluated using the following metrics: (1) the number of total and new positives identified, (2) linkage to prevention services for negatives, and (3) linkage to partner services and HIV care for positives. Accurate data are critical for distinguishing new positives from those previously identified but who test again. Ways to improve data and program quality include:

- Increasing the percent of clients using name-associated versus anonymous testing.
- Comparing names of confirmed positives from laboratory data to those in surveillance data.
- Adding a variable to capture when clients acknowledge a previous HIV diagnosis.

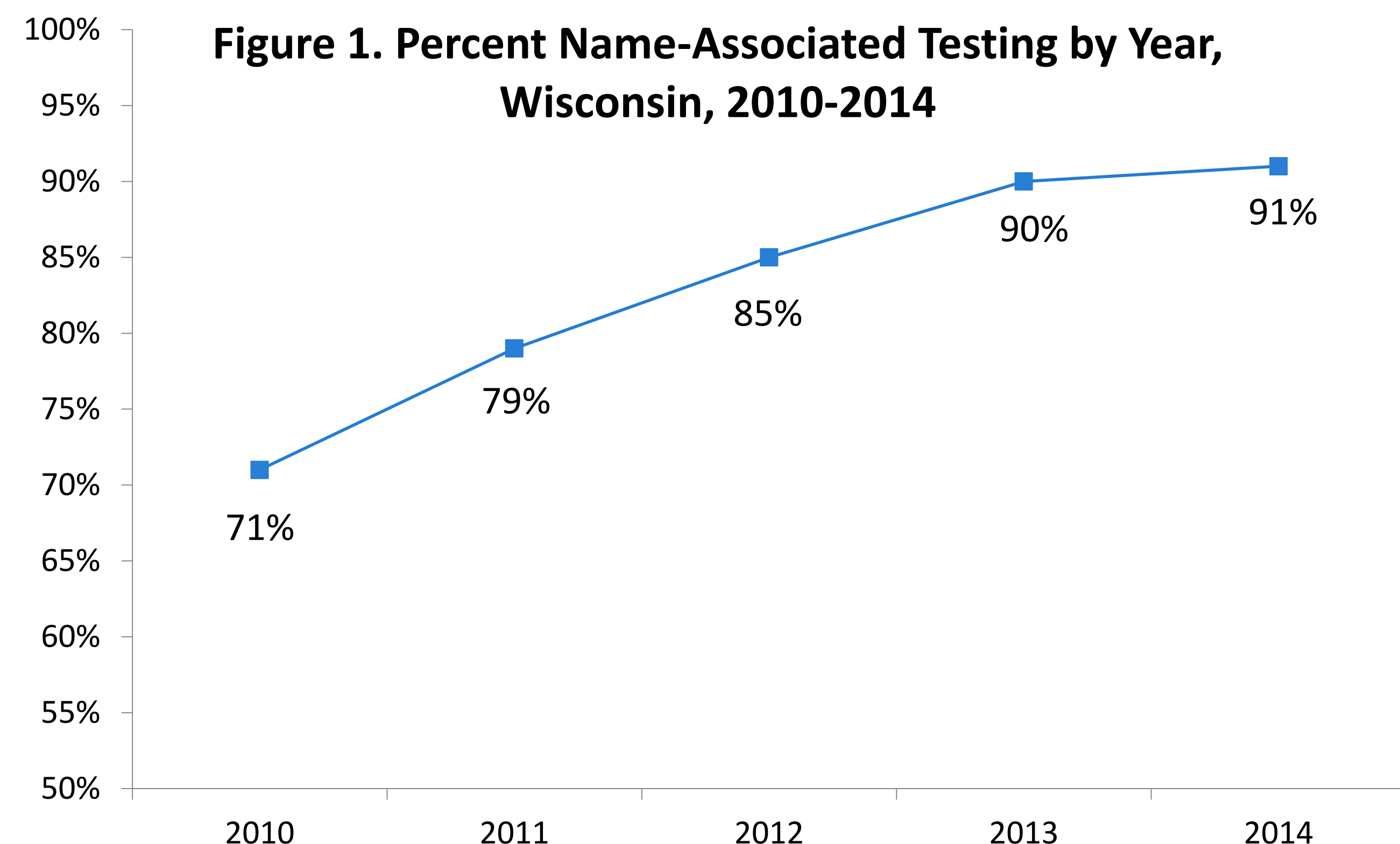
METHODS

Data were analyzed for the years indicated.

- 1) Assessed the percent of name-associated (confidential) versus anonymous tests over time (2010-2014). Name-associated testing is preferred over anonymous so that (a) agencies can report positives to the state and (b) the state is able to contact positives for partner services and/or to help positives access care.
- 2) Assessed how accurately the *Unique Code* provided by clients captures *newly identified* as opposed to *previously identified* positives (2011-2014). The *Unique Code* is a variable created using the first three letters of the client's mother's maiden name and the client's six-digit birthday (e.g., JOH010180). Ideally, clients use the same code every time they test and at every location in the state.
- 3) Compared names of clients testing positive to those previously entered into the eHARS HIV surveillance system (2011-2014). This method is only available for those clients who test confidentially and had a confirmatory sample tested at the Wisconsin State Laboratory of Hygiene.
- 4) Assessed the impact of a new variable (*Acknowledges Previously Positive*) added in Wisconsin in 2013 (2013-2014). This variable identifies clients who only disclose their positive status after receiving a rapid reactive result. These individuals do not have a confirmatory sample submitted, so without this new variable they would appear to be unconfirmed new positives.

RESULTS

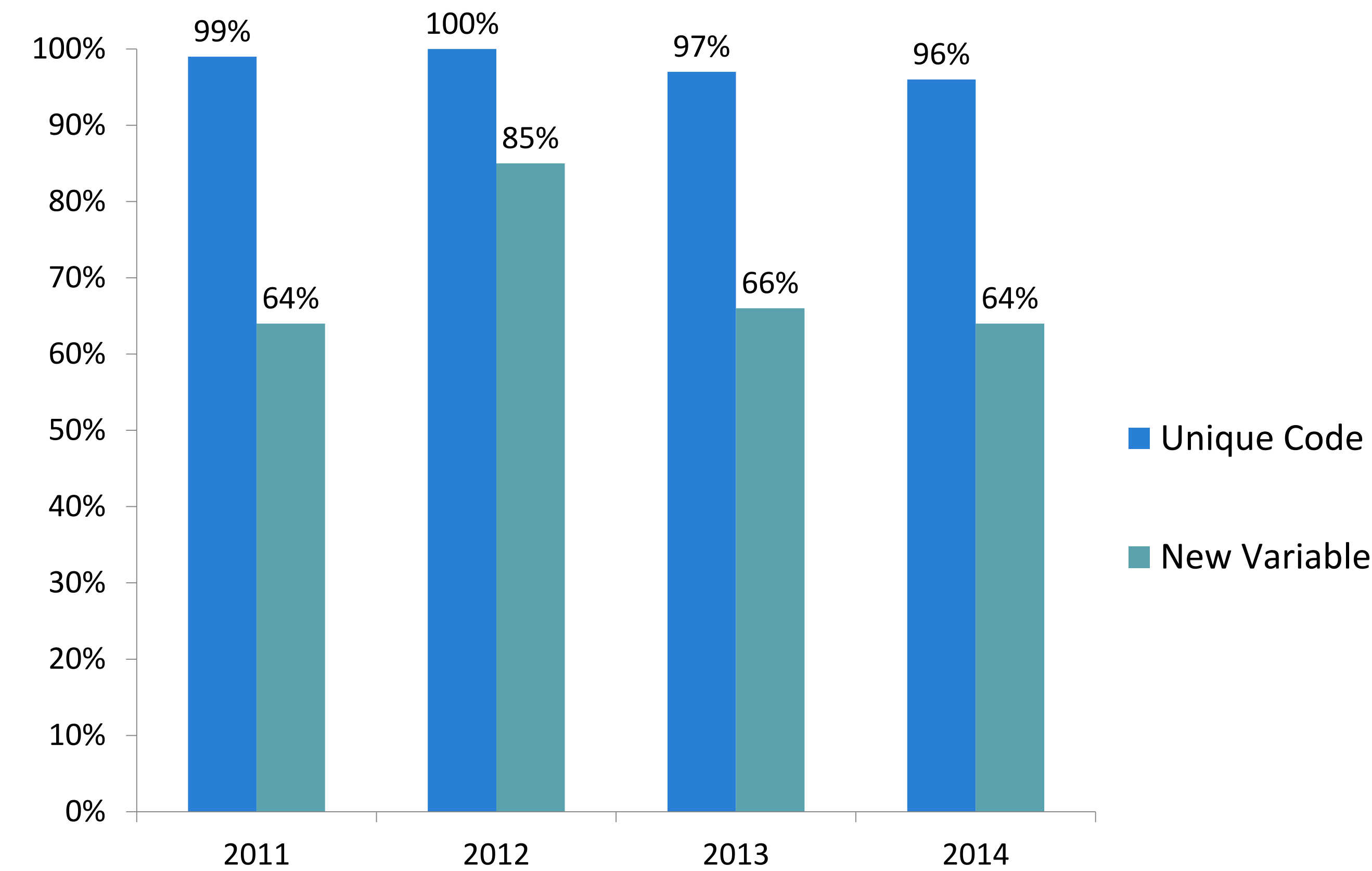
- 1) The percentage of tests that were name-associated versus anonymous increased significantly as testing agencies encouraged clients to test confidentially. The number of total tests decreased by 1,200 during this same time period.



RESULTS

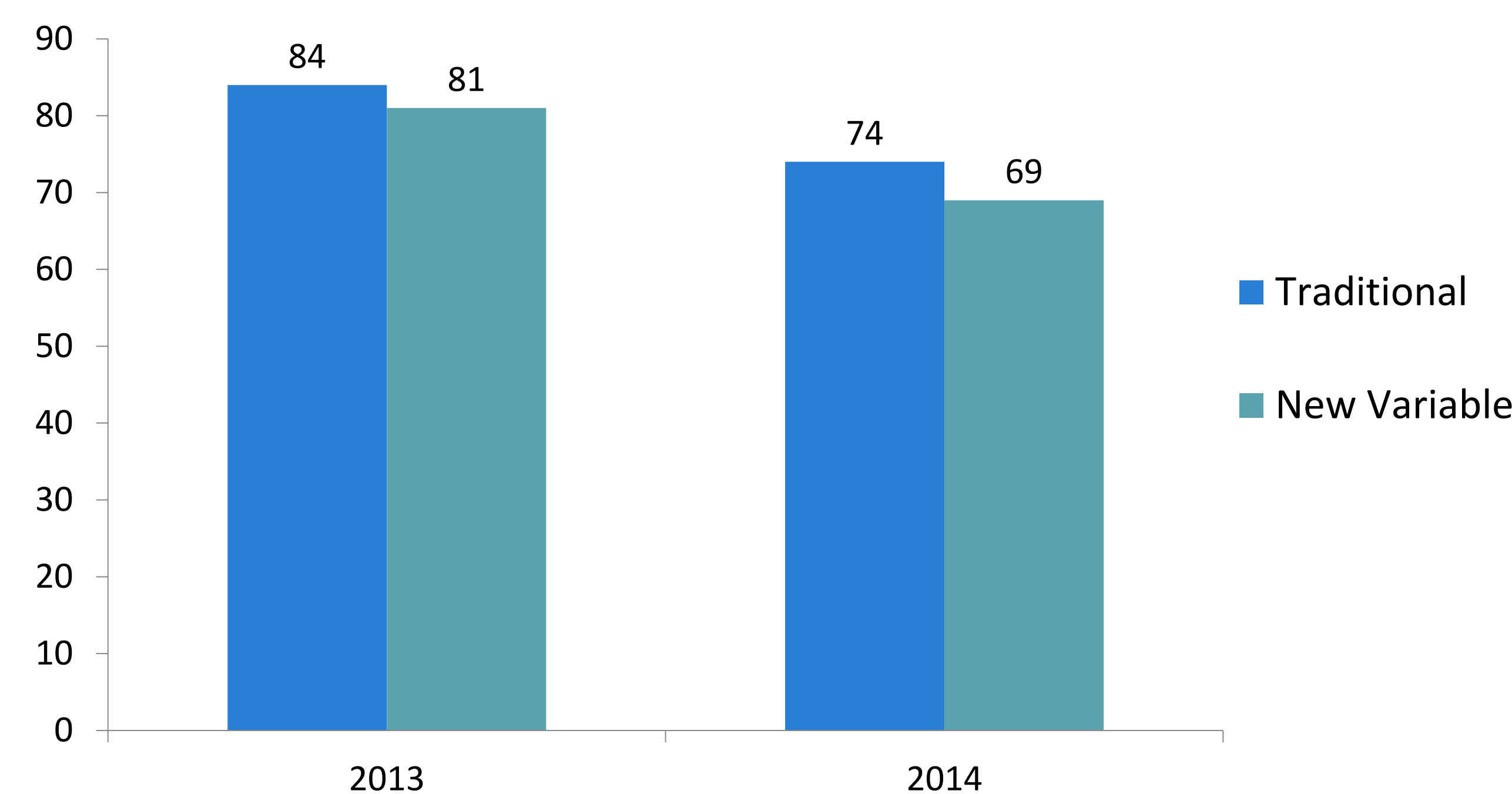
- 2) Using the *Unique Code* alone indicated that 96%-100% of positives each year would be considered "newly identified positives."
- 3) However, comparison of names between laboratory and surveillance data showed that only 64%-85% of positives were truly first-time positives during this time period.

Figure 2. Percent New Positives - Unique Code versus New Variable Method^a, Wisconsin, 2011-2014



- 4) Wisconsin's new variable, *Acknowledges Previously Positive*, indicated 8 (3.5%) of the "new positives" determined by the traditional method of sorting positives had actually been previous HIV diagnoses. While the difference in positivity rate is not significant ($p = 0.43$), adding this extra variable provides a more precise count of new positives and is a stepping stone to learning more about the population that tests after knowing they are positive.

Figure 3. New Positives – Traditional^b versus New Variable^a Method, Wisconsin, 2013-2014



^a "New Variable" method uses self-reported HIV status and checks against the state's surveillance system. The new "Acknowledges Previously Positive" variable is only available in Wisconsin.
^b "Traditional" method uses self-reported HIV status and checks lab data against the state's surveillance system. This method is available to all 50 states.

RESULTS

Table 1 provides a demographic breakdown of new positives compared to previously diagnosed positives during 2011-2014. The only category that is significantly different between the two groups is race. Black individuals make up 70% of the previously diagnosed positives while making up only 42% of new positives.

Table 1. Demographics of positives, Wisconsin, 2011-2014

	New Positives 303 (69%)	Previously Diagnosed Positives 134 (31%)	P-Value ^a	
Gender				
Male	270 (89%)	115 (86%)	0.6033	
Female	27 (9%)	16 (12%)		
Transgender	6 (2%)	3 (2%)		
Age Range				
15-19	17 (6%)	8 (6%)	0.6410	
20-24	77 (25%)	36 (27%)		
25-29	54 (18%)	22 (16%)		
30-34	41 (13%)	22 (16%)		
35-39	35 (11%)	10 (8%)		
40-44	26 (9%)	12 (9%)		
45-49	24 (8%)	6 (5%)		
50+	29 (10%)	18 (13%)		
Race/Ethnicity				
Hispanic	50 (16%)	13 (10%)	<0.0001	
Non-Hispanic	Black/African American	127 (42%)		93 (69%)
	White	110 (36%)		23 (17%)
	Multi-race	8 (3%)		4 (3%)
	Other	8 (3%)		1 (1%)
HIV Risk Category^b				
MSM	228 (75%)	100 (75%)	0.5102	
PWID	11 (4%)	6 (5%)		
High-risk Heterosexual ^c	18 (6%)	7 (5%)		
MSM/PWID	16 (5%)	3 (2%)		
Other Risk Category	30 (10%)	18 (13%)		

^a All P values between the two groups were obtained using the Chi-square test.

^b Each category is mutually exclusive.

^c High-risk Heterosexual = Female who has sex with an MSM, a person who has sex with a PWID, a person who has sex with an HIV+ person.

CONCLUSIONS

- Wisconsin's efforts to increase name-associated testing have markedly improved data quality.
- Receiving names of confirmed positives from laboratory data allows us to match to the surveillance database. Matching establishes positives as new or previously diagnosed and enables assessment of linkage to care.
- Finding that the majority of previously diagnosed individuals use different *Unique Codes* at subsequent testing visits underscores the importance of name-associated testing.
- Wisconsin's "Acknowledges Previously Positive" variable provides additional precision to positivity measurements and could prove valuable if adopted by other states.
- Next steps include asking previously diagnosed individuals in a systematic way why they get tested again to determine methods for reducing the number of clients who do so.

ACKNOWLEDGEMENTS

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