

# Successful interventions to increase use of Self Obtained Vaginal Swabs (SOVs) for chlamydia/gonorrhea testing in WA State

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Infertility Prevention Project Region X

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ISSTD 2011, Quebec CA

# Infertility Prevention Project (IPP)

- National program to fund chlamydia & gonorrhea screening & treatment
- Collaboration between US Centers for Disease Control & Office of Population Affairs
- Targets low-income, sexually active women
- Family Planning, STD, other women's health clinics
- Collects data for prevalence monitoring
- 10 Regional Infrastructures

# Specimen Source Options

- Endocervical
- Urethral
- Urine (patient-obtained)
- Vaginal swab (patient- or clinician-obtained)
- Other sites
  - conjunctival, rectal, pharyngeal

# Self-Obtained Vaginal Swabs (SOV): Advantages

- Amenable to NAAT technology: highly sensitive, specific
- Highly acceptable to women
- Avoid pelvic examination
- Especially useful for asymptomatic screening
- Improves outreach to underserved population groups
- May allow for more representative screening group (not just people who come to clinic)

# Presentation Objectives

- Describe interventions in Washington State (WA) to increase use of Self-Obtained Vaginal Swabs (SOVs) for Chlamydia (CT) and Gonorrhea (GC) testing;
- Describe clinics' adoption and use of SOVs;
- Explore trends and associations in SOV use vs. other specimen sources.

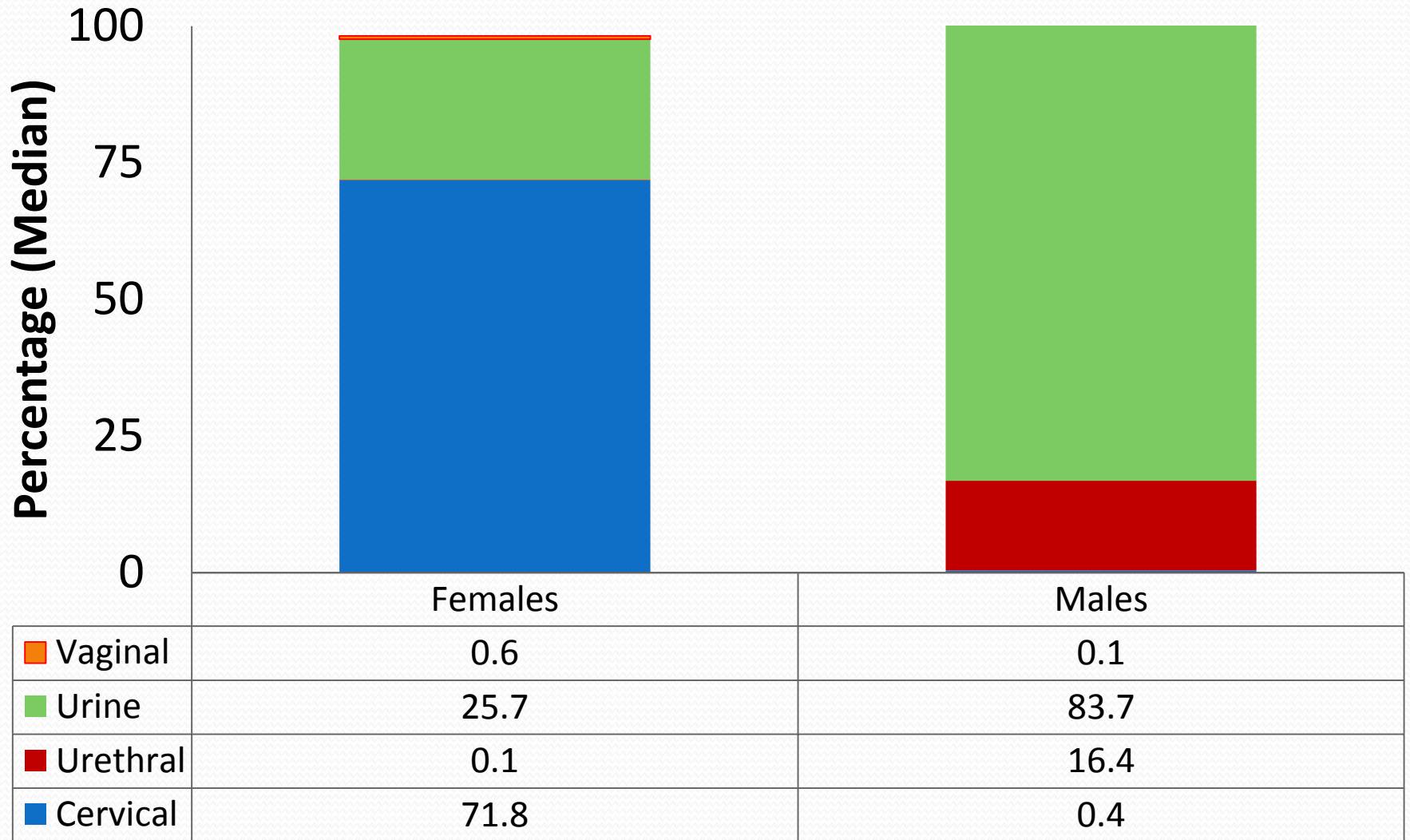
# Methods

1. CDC provided 2009 Infertility Prevention Project (IPP) prevalence monitoring data
  - N tests and specimen source, aggregated to state-level
  - For US and each region, computed median percentage of each specimen source across states.
2. Interviewed WA IPP Coordinator and Nurse Consultant about interventions to promote SOVs.

# Methods

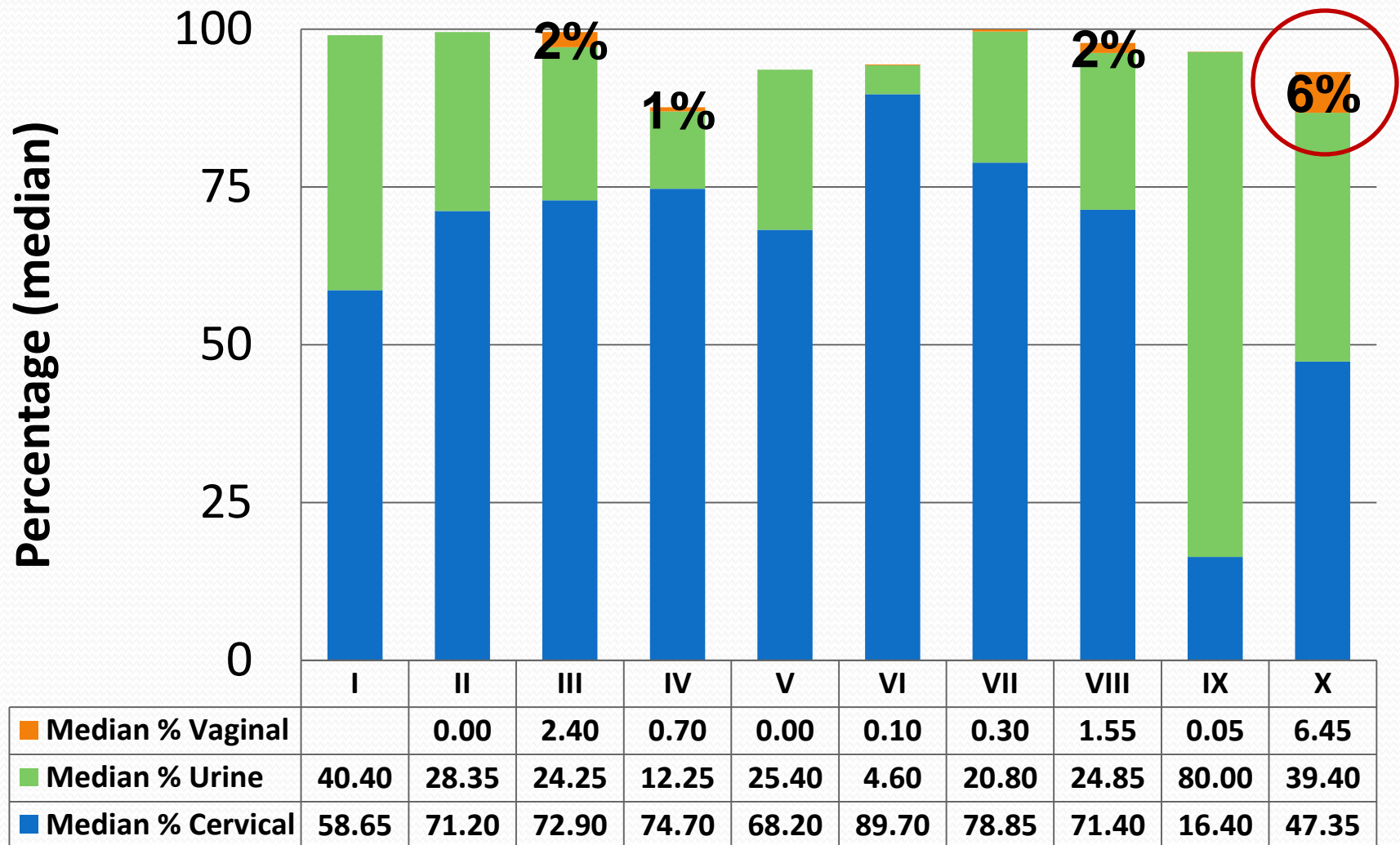
3. WA IPP data for female patients compiled (2007-2010)
  - Generated visit-level and aggregate clinic-level datasets
  - Assessed SOV uptake in clinics averaging >25 female tests/year
    - % of all female CT/GC tests collected by SOV
  - Explored clinic and client factors associated with SOV use
    - Developed multivariate models

# Results: Distribution of CT Tests by Sex and Specimen Source, NATIONAL\*



2009 Infertility Prevention Project data

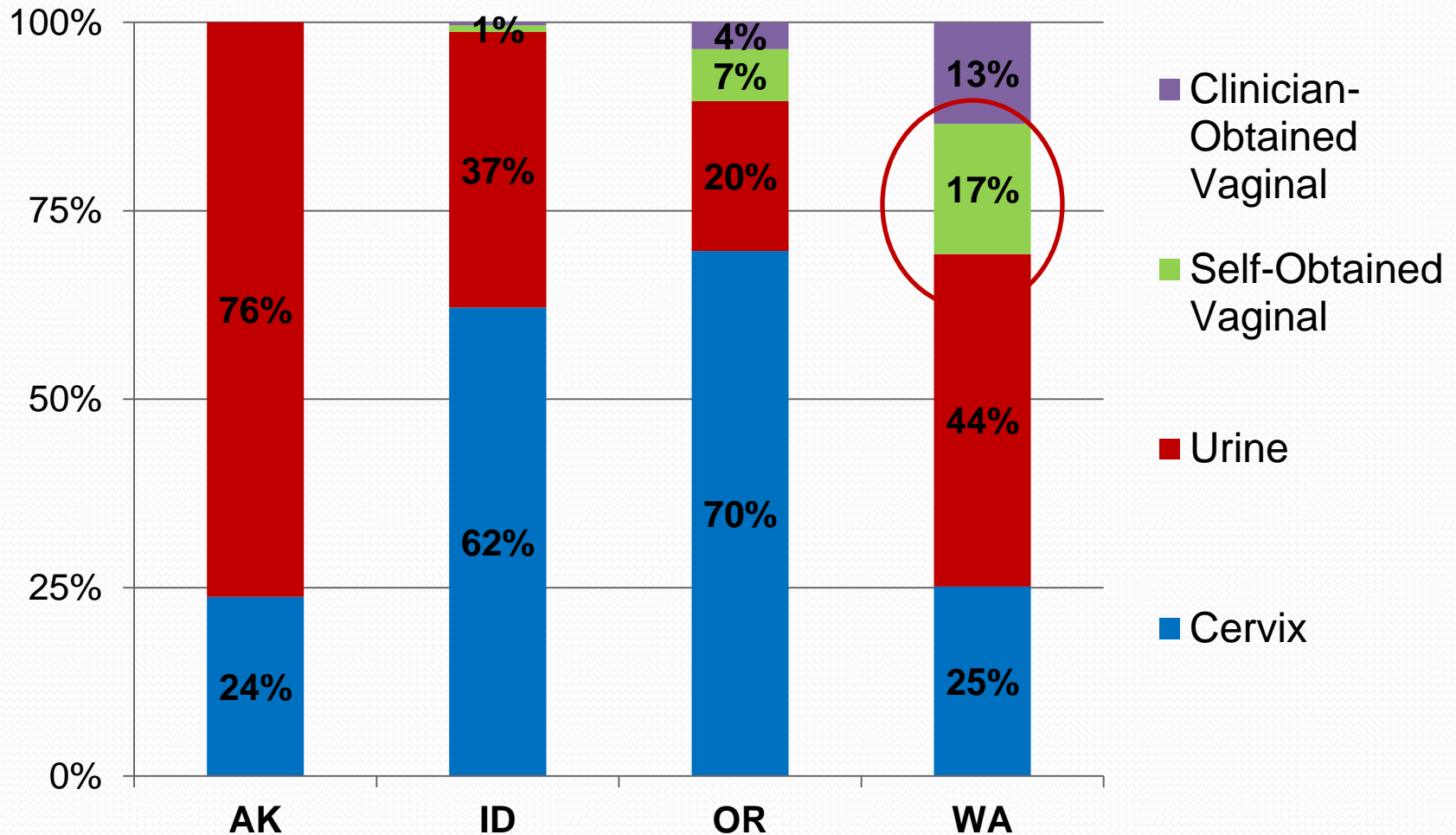
# Distribution of CT Tests by Region and Specimen Source, Females\*



2009 Infertility Prevention Project data

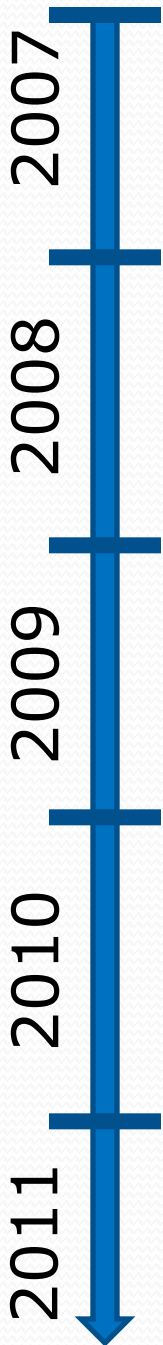
# Region X

## 2010 Female CT test distribution by state



\*AK does not collect vaginal swab options on lab slip

# Intervention Timeline



**1<sup>st</sup> Q 2008 SOV data monitoring begins**

**CSPS grant objective for 2009: “make vaginal swabs specimen of choice”.**

**2009-2010 Mailings to clinics (research articles and materials developed by regional IPP)**

**Late 2009-2010 Follow up with slow adopters**

**2010 Modified CSPS grant objective to replacing urine with SOV**

**Jan 2010 Region X vaginal swab webinar w/ Dr. Jeanne Mrazzozo**

**Dec 2010 WA State IPP webinar featured vaginal swabs**

**2011 Spokane and UW labs validate SOV for use outside the clinic**

# Directions for vaginal swab collection (for patients)

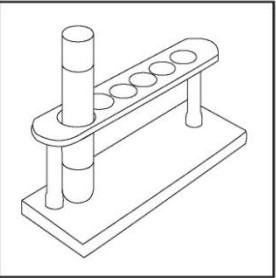


Figure 1

1

Open the vaginal swab collection kit.

2

Remove tube from package and place in test tube rack as shown in **Figure 1**. If there is no test tube rack, please check with clinic staff.

Remove cap from test tube without touching the inside of the cap or tube. If cap is dropped please notify clinic staff.

3

Remove swab package from collection kit.

4

Open the swab package as shown in **Figure 2**.

5

Remove the swab; do not touch the soft tip or lay the swab down.

6

Hold the swab as shown in **Figure 3**.

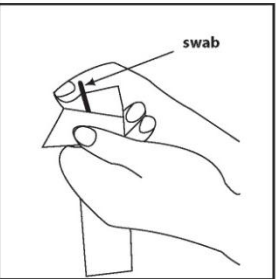


Figure 2

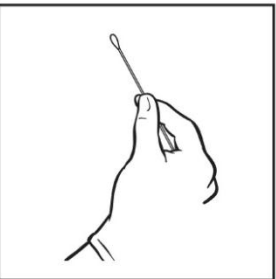


Figure 3

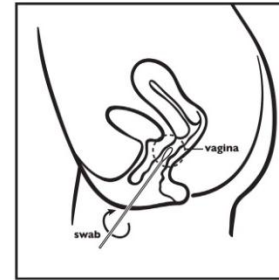


Figure 4

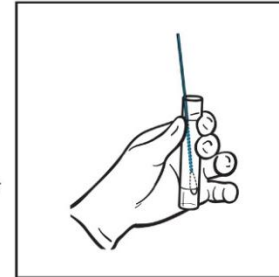


Figure 5

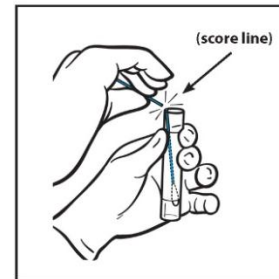


Figure 6

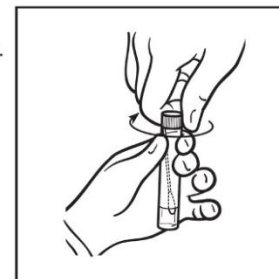


Figure 7

7

Insert the swab into your vagina about two inches as shown in **Figure 4**.

8

Gently rotate the swab for 10 to 30 seconds in your vagina.

9

Withdraw the swab without touching the skin.

10

Place the swab into the test tube so that the tip of the swab is visible below the tube label as shown in **Figure 5**.

11

Break the swab shaft against the side of the tube as shown in **Figure 6**; use care to avoid splashing the contents of the tube. If tube is dropped, contents spilled, or if the swab flips out of the tube, please notify clinic staff.

12

Re-cap the tube tightly as shown in **Figure 7**.

**NOTE:** If you have any questions about this procedure, please ask your clinic staff.

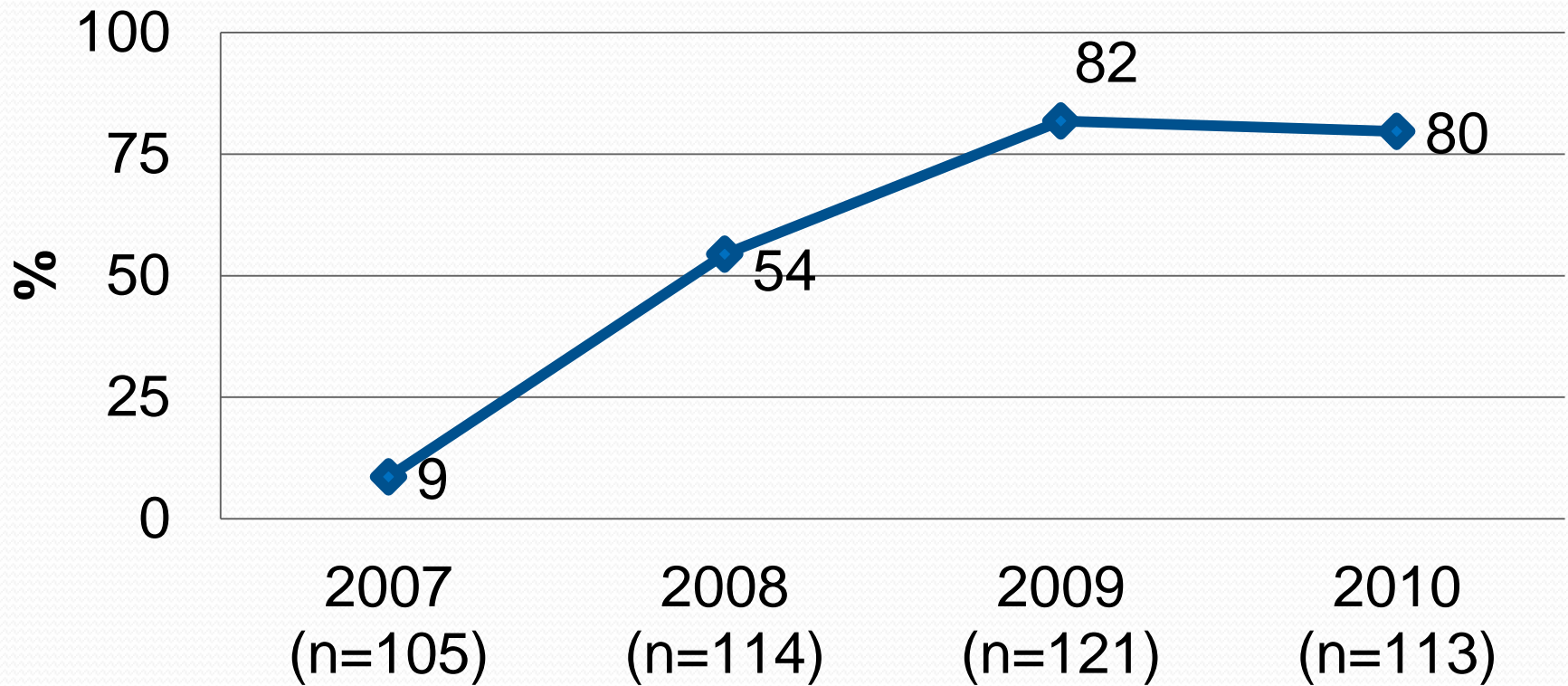
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# Results: Clinics

Years in IPP	N clinics	% of clinics
2 years	13	10.5
3 years	17	13.7
4 years	94	75.8
Total	124	100

Analysis includes only clinics averaging >25 tests/year

# Results: % of clinics using SOV



Chi square <.001

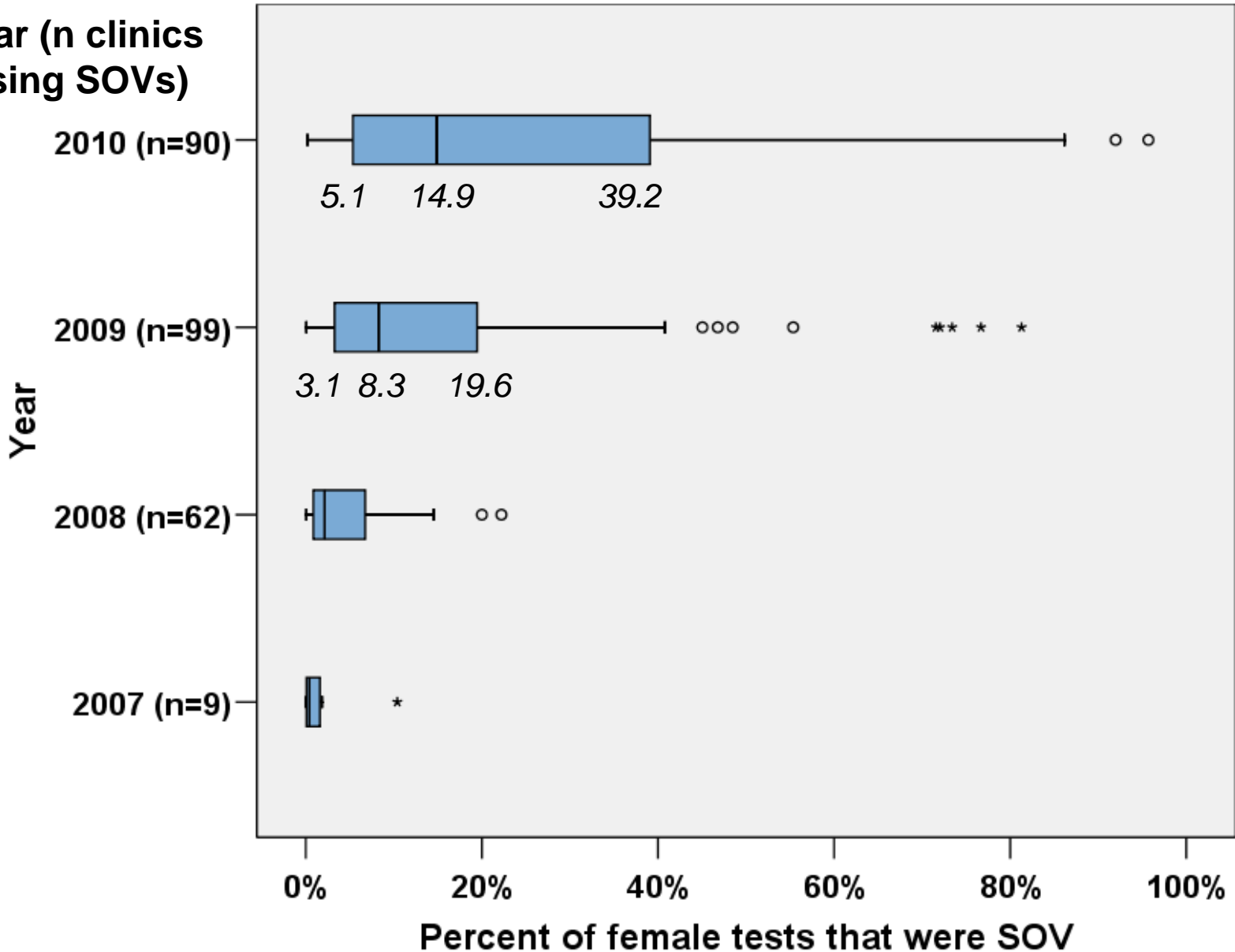
# Mean % SOV Use Across Clinics

Year	N clinics using SOV	CT Tests, Mean % SOV	Std. Deviation
2007	9	1.7	3.32
2008	62	4.2	4.79
2009	99	15.1	18.29
2010	90	24.6	25.08
Total	260	15.3	20.35

p<.001

# Median % SOV Use Across Clinics

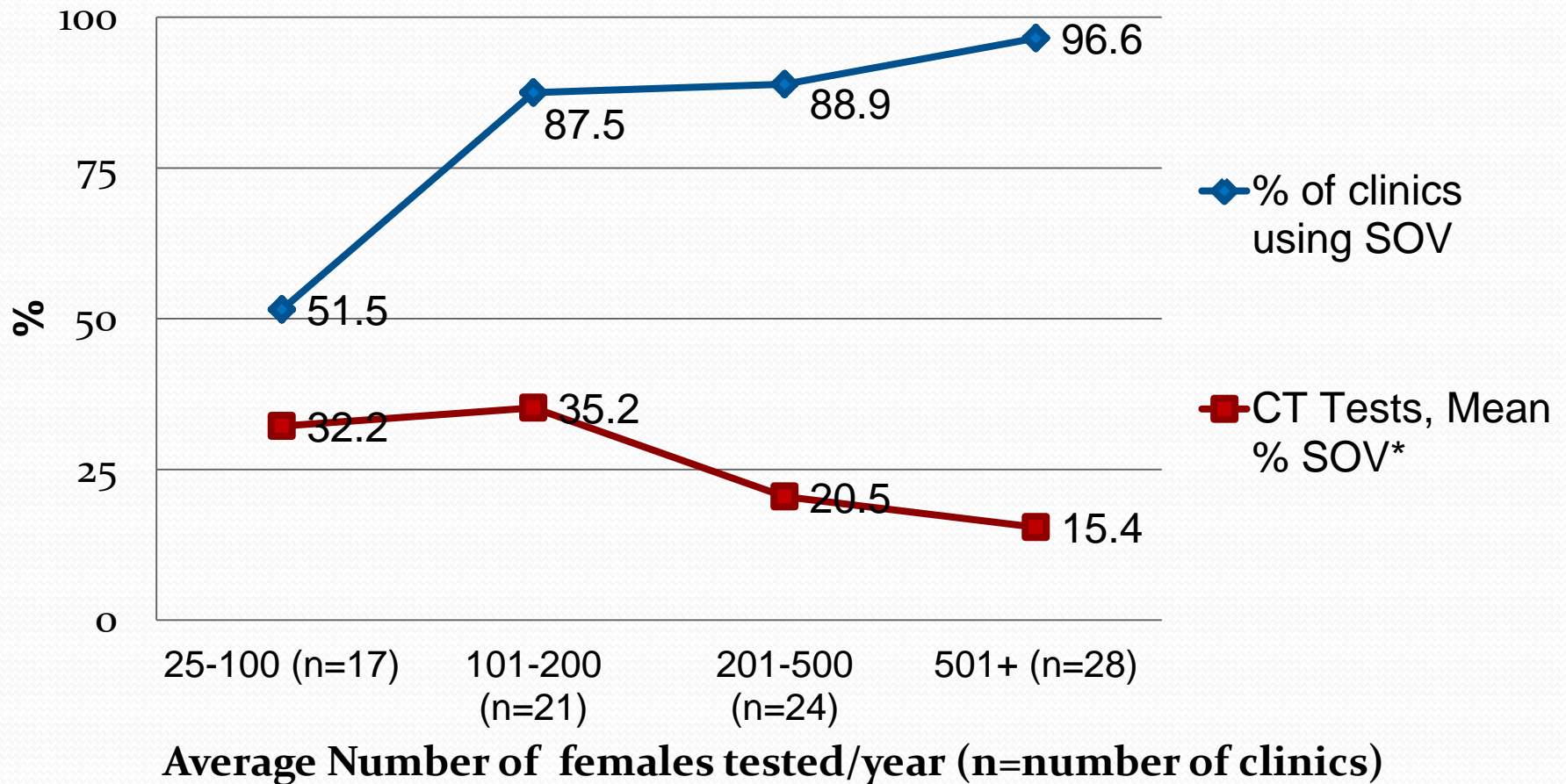
Year (n clinics using SOVs)



# What factors affect whether clinics are using SOVs?

- Clinic size?
- Clinic type?

# SOV Use and Mean % SOV by clinic size (year 2010)



P<.05

# SOV Use by Clinic Type

(year 2010)

FP/RH clinic	N	% using SOV	CT Tests, Mean % SOV
No	55	58.2	30.3
Yes	58	100.0	21.4
		<i>p &lt; .001</i>	<i>NS</i>

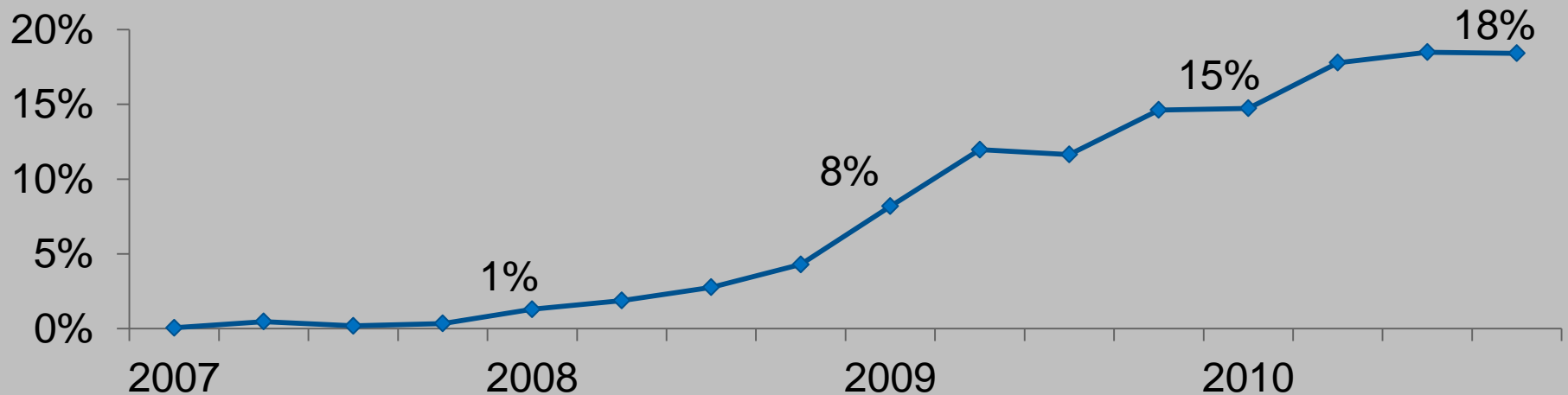


# Client Results: CT/GC tests

# SOV Use during client visits

Year	# of CT/GC tests (females)	# SOV	Percentage
2007	48,223	123	0.3%
2008	51,306	1290	2.6%
2009	54,055	5984	12.4%
2010	44,292	7,645	17.0%

**% self-obtained vaginal swabs by calendar quarter**



# Client Visit Specimen Source Distribution by Year

	2007	2008†	2009	2010	% change, 2007-2010
	N %	N %	N %	N %	
<b>Clinician-collected*</b>	25,076 52.0%	23,231 45.3%	22,814 42.2%	17,106 38.6%	-13.4%
<b>Urine</b>	23,024 47.7%	26,785 52.2%	25,257 46.7%	19,541 44.1%	-3.6%
<b>SOV</b>	123 0.3%	1,290 2.5%	5,984 11.1%	7,645 17.3%	17.0%
<b>Total</b>	48,223 100.0%	51,306 100.0%	54,055 100.0%	44,292 100.0%	0.0%

\*Clinician-Collected methods include endocervical and clinician-collected vaginal swabs

†Intervention initiated in 2008

p <.001

n=197,876

# Predictors of SOV use, given availability in clinic (2010)

## Multivariate Logistic Regression

Covariates: Age, Clinic Type, Race/Ethnicity, CT Symptoms, Pregnant

(n= 36,710 visits to 90 clinics)

Characteristic	% SOV	AOR	95% CI
<b>Age</b>			
10-19	28.9	2.54	(2.28, 2.82)
20-24	17.0	1.70	(1.52, 1.88)
25-29	10.6	1.10	(0.97, 1.25)
30+	9.0	<i>REF</i>	
<b>Clinic Type</b>			
FP/RH	18.3	<i>REF</i>	
STD	18.9	0.89	(0.69, 1.15)
College Health	15.2	0.50	(0.41, 0.61)
Adolescent school-based	61.4	5.21	(4.57, 5.92)
Community Health	5.9	0.52	(0.43, 0.62)
Other	9.8	0.58	(0.48, 0.7)

p <.05

# Predictors of SOV use, given availability in clinic (2010)

## Multivariate Logistic Regression

Covariates: Age, Clinic Type, Race/Ethnicity, CT Symptoms, Pregnant

n= 36,710 visits to 90 clinics

Characteristic	% SOV	AOR	95% CI
<b>Race/Ethnicity</b>			
White	21.2	<i>REF</i>	
Black	21.6	0.75	(0.67, 0.83)
Asian	17.2	0.76	(0.68, 0.85)
Hawaiian/Pacific Islander	22.2	0.87	(0.68, 1.09)
American Indian	18.6	0.89	(0.71, 1.1)
Hispanic	12.1	0.58	(0.53, 0.62)
<b>Symptoms</b>			
No	19.9	<i>REF</i>	
Yes	10.7	0.48	(0.43, 0.52)
<b>Pregnant</b>			
No	20.4	<i>REF</i>	
Yes	12.3	0.70	(0.64, 0.75)

# Conclusions

- WA state is a leader in SOV uptake
- SOV use has increased substantially
  - % of all WA state IPP tests
  - # of clinics using SOVs
  - volume of SOV use within clinics
- In clinics using SOVs, client likelihood of SOV use varies by age, clinic type, race/ethnicity, pregnancy status and CT/GC symptoms

# Implications

- Successful implementation of a valuable innovation!
  - multi-lateral messaging efforts
  - Uptake particularly successful in Family Planning clinics
  - Some clinics slower to adopt
- Acceptability
  - Clients are using vaginal swabs
  - Variations in clinic practices and client preferences need to be further studied
  - Recommend studies to demonstrate clinic-level outcomes (e.g. clinic efficiency)

# Future Directions

- Continue to work with clinics that have not adopted SOVs
  - Explore reasons/barriers
  - Data sharing via standardized annual reports
- Promote screening during non-routine visit types
- Share materials & strategies with other states
- Initiate off-site use of SOVs
- Data analyses: client & provider preferences

# Acknowledgements

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# Thank You!

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