

Impact of an electronic medical record best practice alert on expedited partner therapy for chlamydia infection and reinfection

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BACKGROUND

Background

- ❑ Patients with chlamydia are at high risk for reinfection if sex partners are not treated
- ❑ Expedited partner therapy (EPT) allows providers to prescribe treatment to partners without examining them and could reduce reinfection
- ❑ EPT provision by providers remains low
- ❑ In October 2014, Atrius Health implemented an electronic best practice alert (BPA) to encourage providers to prescribe EPT

Golden MR et al. N Engl J Med 2005, Kissinger P et al. Clin Infect Dis 2005, Schillinger JA et al. Sex Transm Dis 2003, Rosenfield EA et al. Sex Transm Infect 2015.

Objectives

- ❑ Describe patient characteristics associated with EPT provision
- ❑ Assess the impact of the BPA on EPT provision and chlamydial reinfections

METHODS

Methods

- ❑ Eligible patients:
 - ≥ 15 years of age
 - At least one positive chlamydia test between Jan. 1, 2013 – Aug. 31, 2018

- ❑ EMR data were collected via Electronic medical record Support for Public health surveillance platform (esphealth.org)

Methods

- **Potential demographic predictors of EPT included:**
 - Age
 - Sex
 - Race/ethnicity

- **Potential clinical predictors of EPT included:**
 - ICD codes for fever, urethral discharge, urethritis, vaginitis, cervicitis, vaginal leucorrhea, or abdominal pain
 - HIV infection
 - number of chlamydia, gonorrhea, and syphilis tests and diagnoses during past two years

Statistical Methods

❑ Log-binomial regression models:

- Estimate prevalence ratios and 95% confidence intervals for demographic and clinical characteristics
- Generalized estimating equation methods

❑ Interrupted time-series analyses:

- Identify changes in level and slope corresponding to EPT BPA (October 2014)
- Monthly outcomes:
 - 1) chlamydia cases with EPT provided
 - 2) chlamydia cases with test of reinfection in 12 months
 - 3) chlamydia reinfection in 12 months

RESULTS

Characteristics of 6,639 chlamydia diagnoses at Atrius Health, Jan. 1, 2013 through Aug. 31, 2018

Age at diagnosis (years)	N	%
15-24	4,169	62.8%
25-34	1,811	27.3%
35-44	413	6.2%
≥ 45	246	3.7%
Gender		
Female	4,463	67.2%
Male	2,176	32.8%
Race/ethnicity		
Asian	341	5.1%
Black, non-Hispanic	1,573	23.7%
Hispanic	535	8.1%
Other	345	5.2%
White, non-Hispanic	3,356	50.5%
Unknown	489	7.4%
Any symptom	1,491	22.5%

Characteristics, cont.

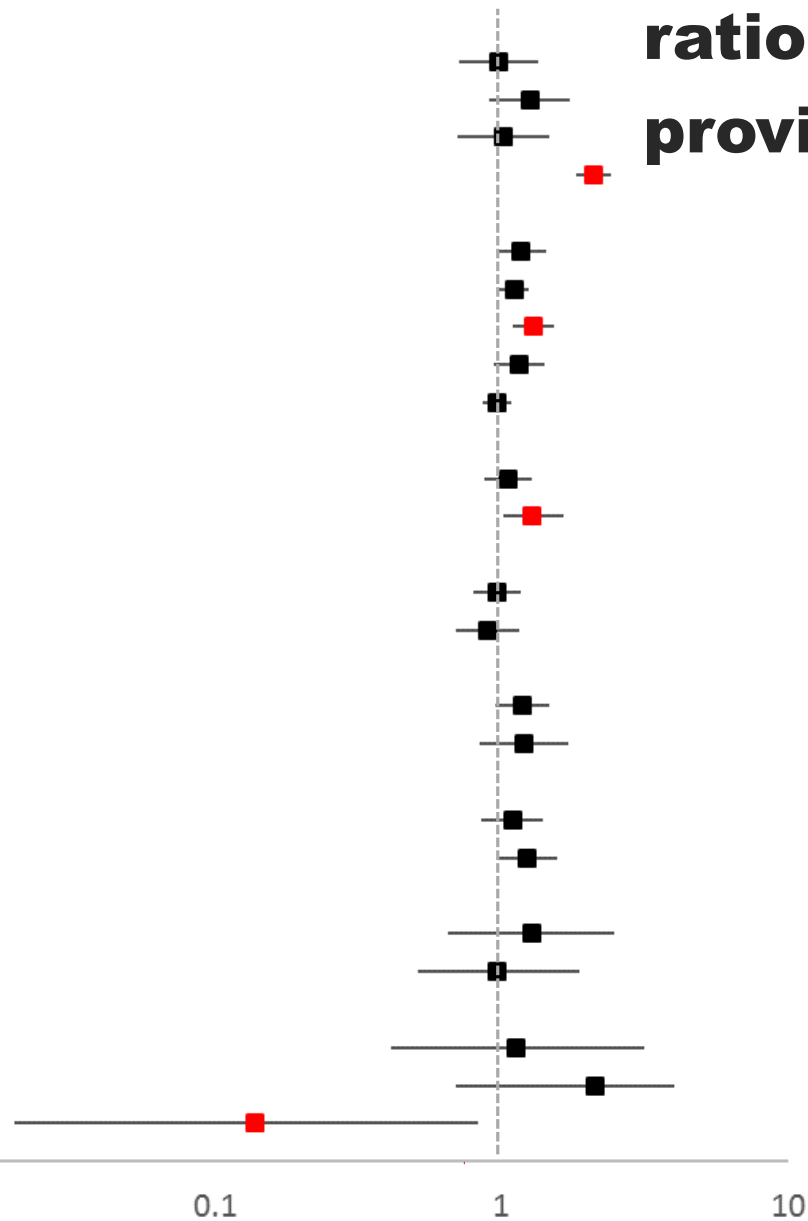
Chlamydia <u>tests</u> during 2 years before chlamydia diagnosis	N	%
0	2,936	44.2%
1	1,904	28.7%
≥2	1,799	27.1%
Gonorrhea <u>tests</u> during 2 years before chlamydia diagnosis		
0	3,448	51.9%
1	1,694	25.5%
≥2	1,497	22.5%
Syphilis <u>tests</u> during 2 years before chlamydia diagnosis		
0	5,094	76.7%
1	1,050	15.8%
≥2	495	7.5%
Living with HIV at the time of chlamydia diagnosis	52	0.8%

Characteristics, cont.

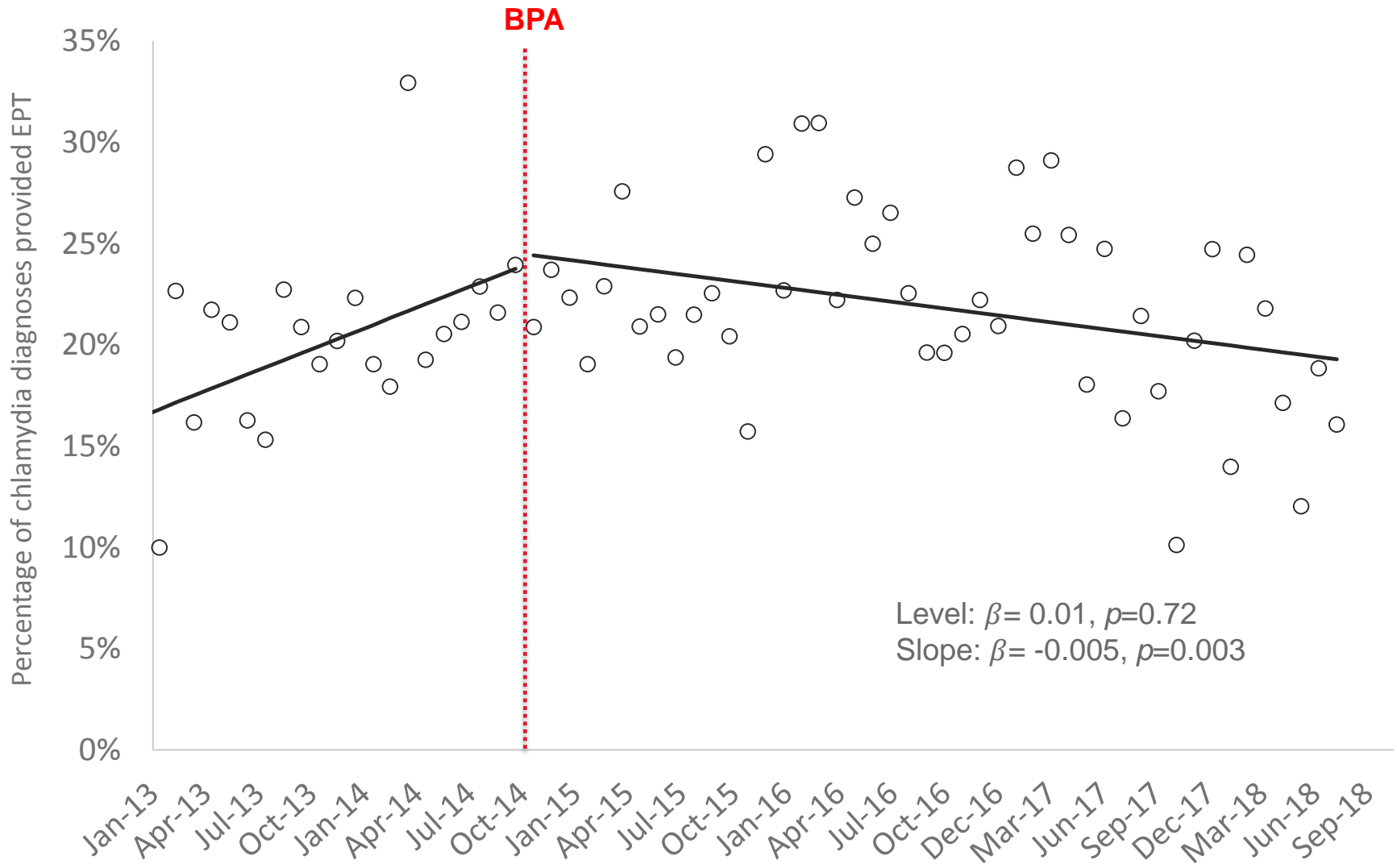
Chlamydia <u>diagnoses</u> during 2 years before chlamydia diagnosis	N	%
0	6,250	94.1%
1	207	3.1%
≥2	182	2.7%
Gonorrhea <u>diagnoses</u> during 2 years before chlamydia diagnosis		
0	6,555	98.7%
1	34	0.5%
≥2	50	0.8%
Syphilis <u>diagnoses</u> during 2 years before chlamydia diagnosis		
0	6,606	99.5%
1	16	0.2%
≥2	17	0.3%

Adjusted prevalence ratios (95% CI) for EPT provision

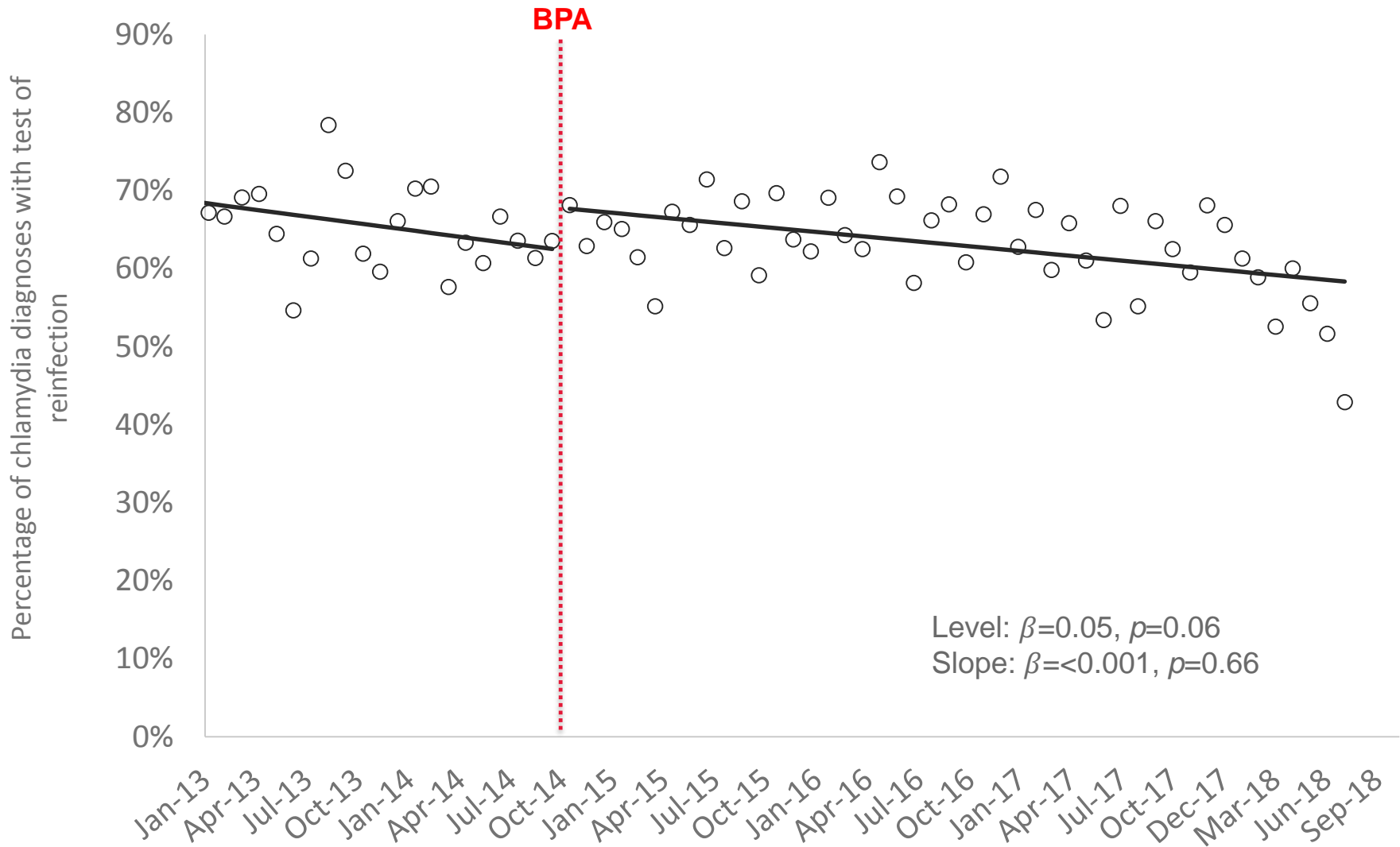
- Age
- 15-24 vs. ≥45
- 25-34 vs. ≥45
- 35-44 vs. ≥45
- Female vs. Male**
- Race/ethnicity**
- Asian vs. White
- Black vs. White
- Hisp vs. White
- Other vs. White
- Symptoms**
- Chlamydia tests**
- 1 vs. 0
- ≥2 vs. 0
- Gonorrhea tests**
- 1 vs. 0
- ≥2 vs. 0
- Syphilis tests**
- 1 vs. 0
- ≥2 vs. 0
- Chlamydia dx**
- 1 vs. 0
- ≥2 vs. 0
- Gonorrhea dx**
- 1 vs. 0
- ≥2 vs. 0
- Syphilis dx**
- 1 vs. 0
- ≥2 vs. 0
- HIV infection**



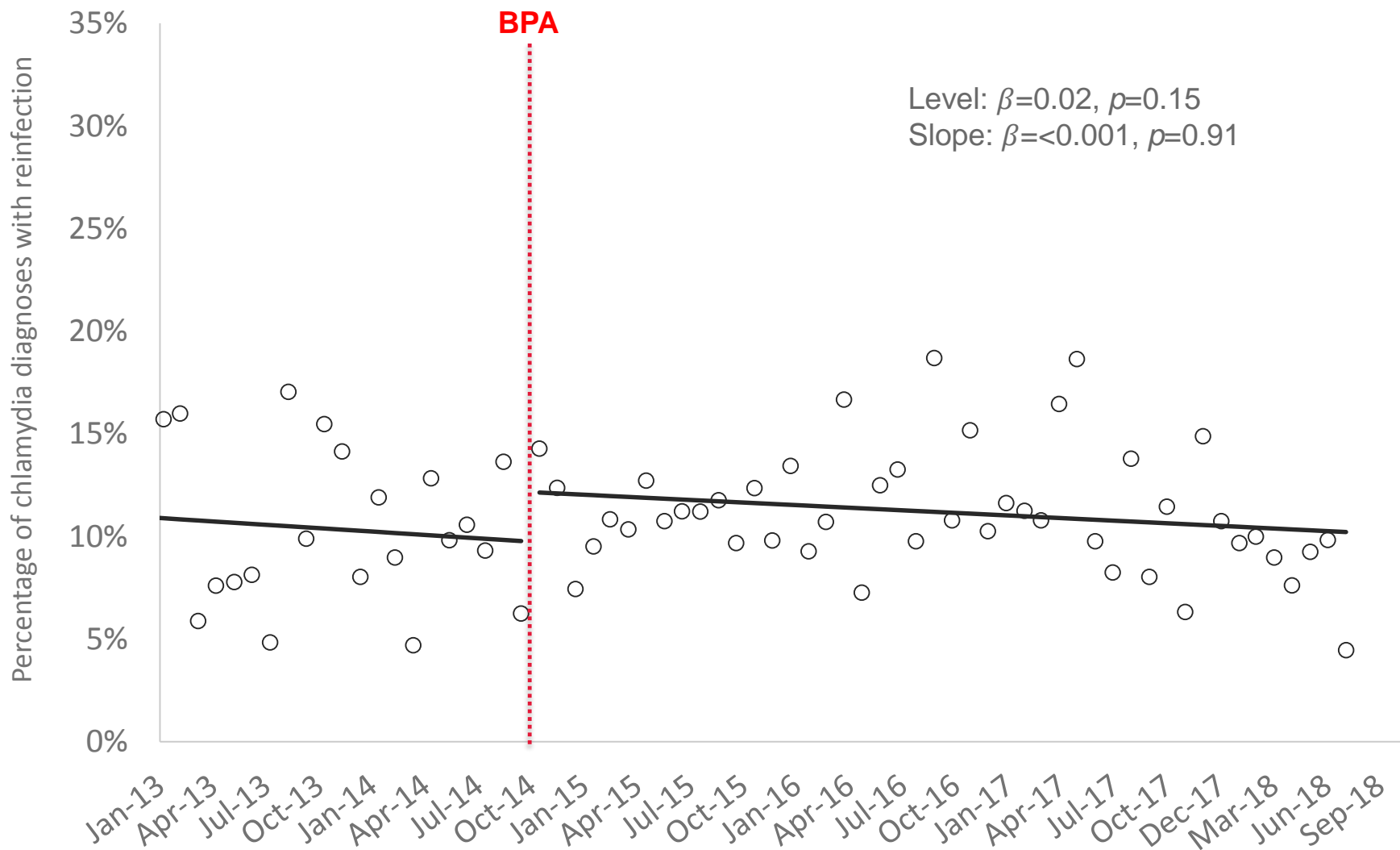
EPT provision, Jan 2013 – Aug 2018



Tests of chlamydia reinfection, Jan 2013 – Aug 2018



Chlamydia reinfections, Jan 2013 – Aug 2018



Conclusions

- ❑ EPT provision declined after introducing the BPA

- ❑ Reasons for decline may be independent of BPA:
 - ❑ Reluctance to discuss sexual partners
 - ❑ Partner counseling
 - ❑ Provider liability concerns

- ❑ Provider interviews to identify barriers and facilitators for EPT provision needed

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Thank you!

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