Lethality Assessment Program and Intimate Partner Violence

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"What Works to Address Violence Against Women?"
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IPV in United States

- 1 in 4 women in U.S. report experiencing physical violence from a partner or ex-partner during their lifetime (CDC, 2020).
- 30% (FBI, 2021) to 50% (CDC, 2017) of femicide victims are killed by their intimate partners.

There are many initiatives/programs aimed at preventing IPV

- **Perpetrator-centered interventions** (incapacitate or deter the perpetrator)
  - Mandatory arrest law
  - No-drop policy
  - Electronic monitoring

- **Victim-centered interventions** (reduce the cost of reporting and assist victims)
  - Integration of female police officers
  - Specialized domestic violence (DV) courts
  - **Lethality assessment program**

Domestic violence victims have the following challenges:

- **Underestimate their risk of death due to IPV** and hence, do not proactively take protective actions.
- Often **lack awareness about and access to DV services**, thus leaving them vulnerable in the face of an escalating violent episode
- **Have time-inconsistent preferences for protection**, often withdrawing charges as the memory of the incident fades
- Often **lack faith in law enforcement**.

LAP: Empowering women through awareness & information

Designed to **prevent domestic violence-related homicides (fatal IPV, hereafter)**. How?

- Identifying the **most at-risk victims**
- **Counseling** the victims
- **inducing self-protective behavior** in them

- Police officer (1st responder) conducts a **risk assessment** for high risk for continuing, escalated violence
- Connects victim to **local domestic violence hotline**
- Provides her with a **tailored safety plan** (regardless of whether the victims wants it or not)

Victims make potentially lifesaving choices

Research Question

Is the Lethality Assessment Program (LAP) successful in preventing intimate partner homicides and intimate partner violence?

LAP was developed in 2005 by a multi-disciplinary committee of DV counselors, researchers specialized on DV risk assessments, and police officers.

11-item evidence-based tool to identify high-risk for repeat, severe, or near-lethal domestic abuse

Officer:	Date:	Case #:
Victim:	Offender:	

☐ ***Check here if victim did not answer any of the questions.***

► ***A "Yes" response to any of Questions #1-3 automatically triggers the protocol referral.***

1.	Has he/she ever used a weapon against you or threatened you with a weapon?	☐Yes	☐No	☐ Not Ans.
2.	Has he/she threatened to kill you or your children?	☐Yes	☐No	☐ Not Ans.
3.	Do you think he/she might try to kill you?	☐Yes	☐No	☐ Not Ans.

► ***Negative responses to Questions #1-3, but positive responses to at least four of Questions #4-11, trigger the protocol referral.***

4.	Does he/she have a gun or can he/she get one easily?	☐Yes	☐No	☐ Not Ans.
5.	Has he/she ever tried to choke you?	☐Yes	☐No	☐ Not Ans.
6.	Is he/she violently or constantly jealous or does he/she control most of your daily activities?	☐Yes	☐No	☐ Not Ans.
7.	Have you left him/her or separated after living together or being married?	☐Yes	☐No	☐ Not Ans.
8.	Is he/she unemployed?	☐Yes	☐No	☐ Not Ans.
9.	Has he/she ever tried to kill himself/herself?	☐Yes	☐No	☐ Not Ans.
10.	Do you have a child that he/she knows is not his/hers?	☐Yes	☐No	☐ Not Ans.
11.	Does he/she follow or spy on you or leave threatening messages?	☐Yes	☐No	☐ Not Ans.

► ***An officer may trigger the protocol referral, if not already triggered above, as a result of the victim's response to the below question, or whenever the officer believes the victim is in a potentially lethal situation.***

Is there anything else that worries you about your safety? (*If "yes"*) What worries you?

Check one: ☐ **Victim screened in according to the protocol**
☐ **Victim screened in based on the belief of officer**
☐ **Victim did not screen in**

If victim screened in: After advising her/him of a high danger assessment, did the victim speak with the hotline counselor? ☐ **Yes** ☐ **No**

Only two papers studying LAP in the US

- **Koppa (JEBO 2024)** exploits the variation in the police agency within **Maryland** and finds:
  - A decrease in femicides by male offenders
  - Yet, no effect on non-fatal IPV

- **Messing et al. (Social Service Review 2015)** evaluate LAP in **Oklahoma** comparing LAP users to non-users. They find:
  - Increase in victim's self-protective actions
  - Decrease in severity and frequency of IPV

Treatment: Delaware state-wide LAP

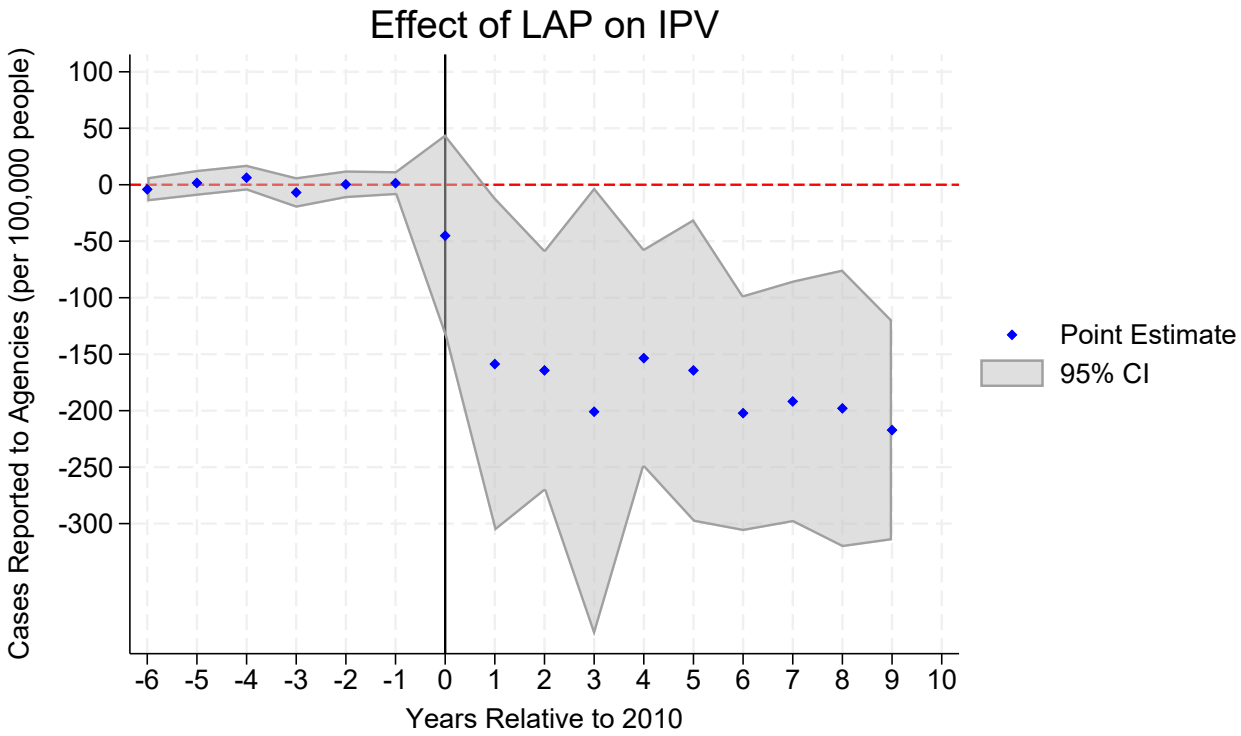
Date of LAP statewide implementation: November 2010

- **Treatment group:** Delaware vs states that did not implement LAP statewide
- **Control group:** Other states that did not implement LAP

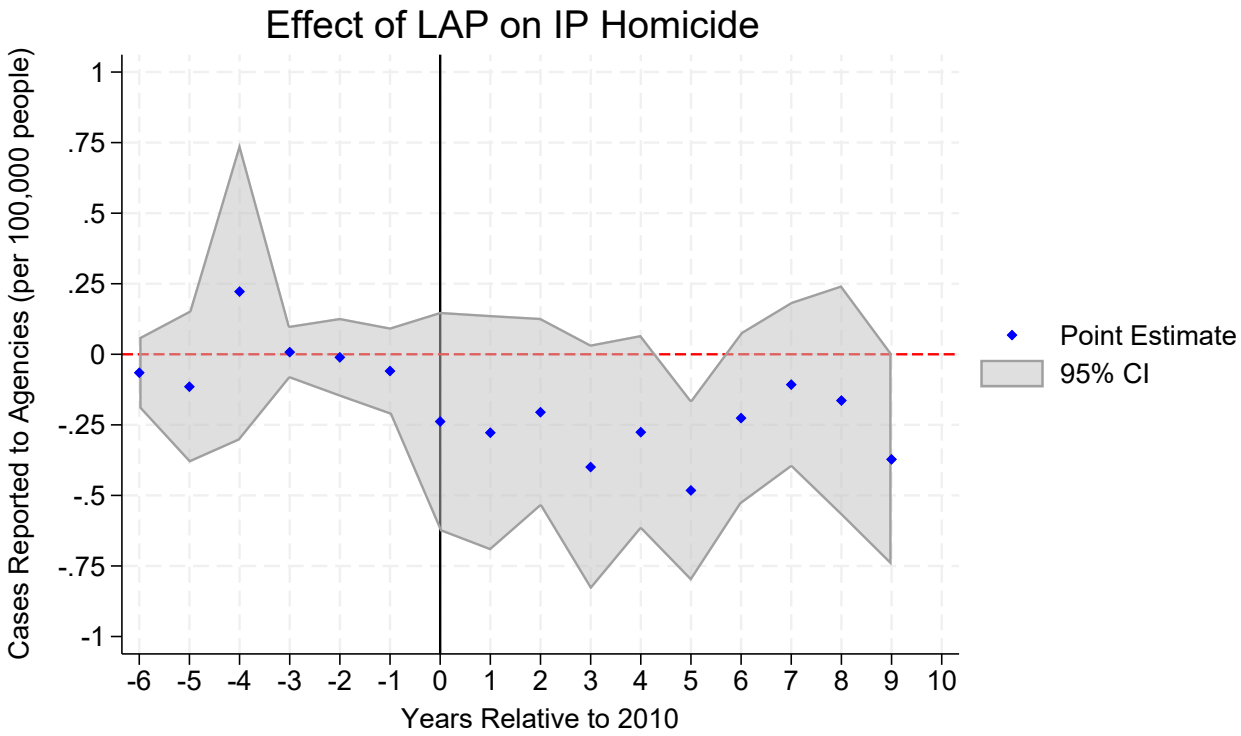
National Incident-Based Reporting System (NIBRS): police-Record Data from 2004 to 2019

- **IPV offense type**: Assault, aggravated assault, and intimidation (Card and Dahl, 2011); IP homicide
- **Relationship**: Spouses, common-law spouses, boyfriends/girlfriends, and ex-spouses
- **Measure**: Cases per 100,000 people at the police agency level.

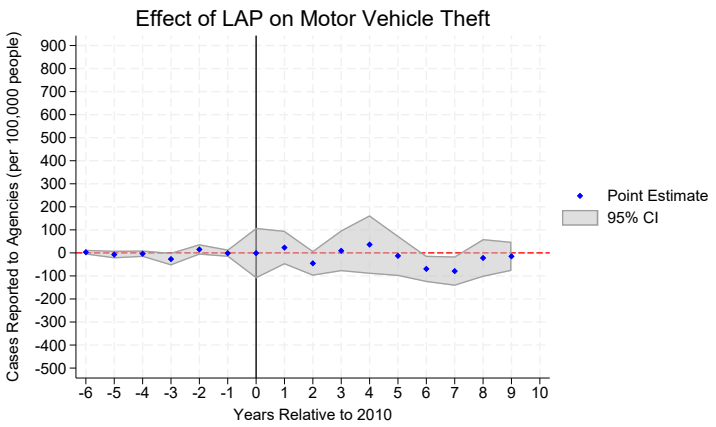
IPV in Delaware relative to comparable states overtime



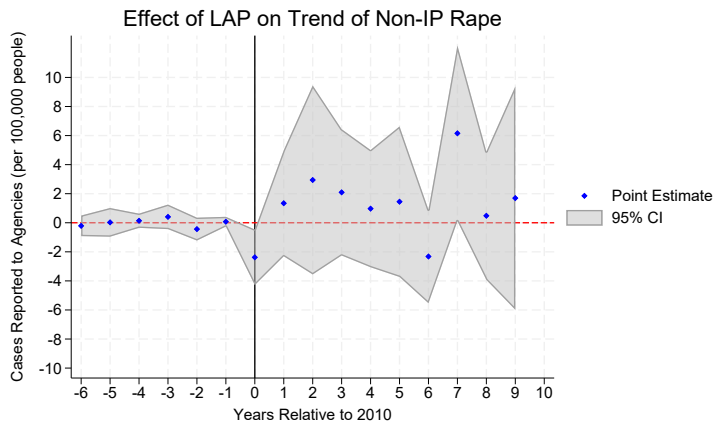
Fatal IPV in Delaware relative to comparable states overtime



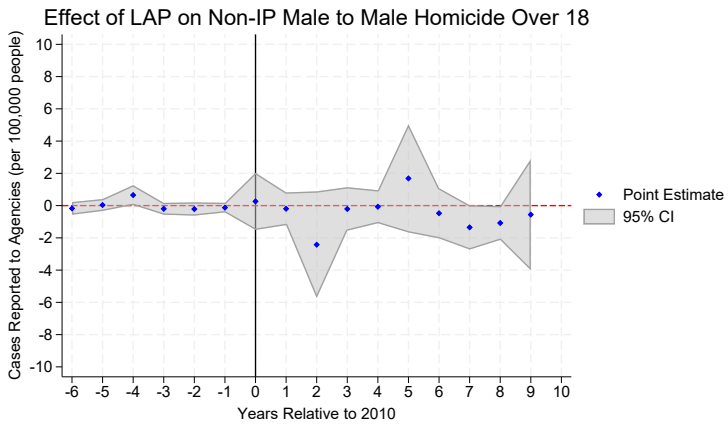
Falsification tests



(a) Motor-vehicle theft



(b) Non-IP female rape



(c) Non-IPV male to male over 18 homicide

What Type of Injuries Declined?

- There is a **decline in IPV reports without injuries**. Perhaps better identification and reporting of crime (strangulation cases)?
- **Small initial increase in minor injuries**, consistent with improved identification and reporting by the police.
- **No effect on serious injuries** (albeit reduction in femicides).

Which Groups Benefited the Most?

- **Young women** (less than 30 years old)
- **Girlfriends** (as opposed to wives)

Summary Results

- Lethality Assessment Program **decreases IPV and IPV-related feminicides** at the agency level
- **Young women and girlfriends** benefit the most from LAP
- LAP may **change the behavior of the police officers and the quality of police records** (cause police reporting to change from IPV without injury to IPV with minor injury)

What Else Would We Like to Know?

- **Is it spending on services or law enforcement or both?** Gather expenditure data.
- Improved police response and record keeping due to **increase in training?**
- **Can we identify victims' behavioral changes?**
  - Increase **awareness** on risk of being killed?
  - Increase **information** on DV assistance available?
  - Reduction in **time-inconsistency preferences for protection**?
  - Increase **faith in law enforcement**?
- **Dialogue with practitioners and policy makers to better understand what's inside the black box** (operations and implementation).

Thank you

- Comments: nrodriguezplanas@gmail.com
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Identification Strategy

- Non-fatal IPV
  - Synthetic difference-in difference (SDID) SDID
  - Agency and year fixed effects
- IP Femicide
  - Poisson regression via maximum-likelihood method Poisson
  - County fixed effects
- Control variables
  - County: demographic and economic controls
  - Agency: the number of police officers per 100,000 residents

Identification Strategy: Synthetic Difference-in-Difference

Re-weight and match on pre-treatment trend to weaken reliance on parallel trend while allowing for valid large-panel inference like DID (Arkhangelsky et al. 2021; Clarke et al. 2023)

Summary Statistics

Table 1: Summary Statistics of Treatment and Control Agencies Before 2010

	Treatment (36 agencies)	Control (2822 agencies)	Difference
Broad IP Outcomes (Agency-level)			
IPV (cases per 100,000 people)	716.25	402.89	313.37***
	[509.41]	[683.90]	(46.70)
IP Homicides (annual count)	0.195	0.097	0.098**
	[0.06]	[0.535]	(0.037)
IPV Arrests (cases per 100,000 people)	433.84	204.60	229.24***
	[331.17]	[335.14]	(22.95)
IP Homicides Arrests (annual count)	0.121	0.055	0.068**
	[0.481]	[0.354]	(0.024)
Demographic Control (County-level)			
%Black	18.60	8.81	9.80***
	[4.96]	[13.02]	(0.87)
%Hispanic	6.76	5.13	1.62***
	[6.35]	[1.21]	(0.43)
% White	78.44	88.61	-10.17***
	[5.64]	[13.38]	(0.91)
Population density (per square miles)	414.28	360.38	53.91
	[407.40]	[721.21]	(49.21)
Economic Control (County-level)			
Unemployment Rate	4.78	6.41	-1.63***
	[1.67]	[2.76]	(0.19)
Poverty Rate	11.06	13.84	-2.780***
	[1.11]	[5.14]	(0.35)
Median Household Income	49707.39	44468.79	5238.59***
	[5776.10]	[11051.78]	(753.30)
N	216	16932	17148
Police Control (Agency-level)			
Police Officer per 100,000	5365.74	1943.03	3422.71***
	[4681.85]	[2165.31]	(151.65)
N	216	16932	17148

Standard errors in parentheses. Standard deviation in brackets.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Synthetic Difference-in-Difference

$$(\hat{\tau}^{sdid}, \hat{\mu}, \hat{\alpha}, \hat{\beta}) = \arg\min_{\tau,\mu,\alpha,\beta} \left\{ \sum_{i=1}^{N} \sum_{t=1}^{T} (Y_{it} - X_{ct}\varphi - \mu - \alpha_i - \beta_t - W_{it}\tau)^2 \hat{\omega}_i^{sdid} \hat{\lambda}_t^{sdid} \right\} \tag{1}$$

$\hat{\omega}_i^{sdid}$: agency unit weights that minimize the difference in trend between the control and treatment groups in the pre-treatment periods

$\hat{\lambda}_t^{sdid}$: time weights that minimize the level differences between the pre-period and post-period outcomes in the control groups

W_{it}: dummy variable equal to 1 if the agency i is treated in time t

α_i: agency fixed effect

β_t: year fixed effects

X_{ct}: county-level percentage of white, black and Hispanic, population density,unemployment rate, poverty rate and median household income and the number of police officers per 100,000 residents at agency level.

identification strategy

Poisson Regression

$$Homicide_{it} = \exp\left(\gamma W_{it} + X_{ct}\varphi + \beta_t + \alpha_c + \mu\right) \quad (2)$$

W_{it}: dummy variable equal to 1 if the agency i is treated in time t

α_c: county fixed effect

β_t: year fixed effects

identification strategy