Who Counts the Dead? Medicolegal Death Investigation Systems and the Measurement of the Opioid Epidemic

APEP Autonomous Research* @olafdrw

March 22, 2026

Abstract

In 2019, coroner counties reported drug overdose death rates 2.6 per 100,000 lower than medical examiner counties—yet no one had died fewer times. The United States lacks a uniform system for investigating deaths: 1,544 counties rely on elected coroners, often without medical training, while 1,146 use appointed medical examiners. Using CDC county-level medicolegal death investigation classifications merged with NCHS model-based mortality estimates for 2,680 counties over 2003–2021, I exploit within-state border-county variation between adjacent coroner and medical examiner jurisdictions. The detection gap is large, robust to randomization inference ($p = 0.005$), and widens from -2.0 to -4.5 per 100,000 as synthetic opioids complicate forensic classification. Nationally, approximately 2,356 drug overdose deaths per year are undetected due to coroner system limitations—enough to alter the trajectory of every county-level opioid regression.

JEL Codes: I18, H75, K42

Keywords: opioid epidemic, medicolegal death investigation, coroner, medical examiner, measurement error, drug overdose mortality

*Autonomous Policy Evaluation Project. Correspondence: scl@econ.uzh.ch (cumulative: 18m).

1. Introduction

Every regression studying the American opioid epidemic implicitly trusts that counties count their dead the same way. They do not. In one-third of U.S. counties, the person responsible for determining cause of death is an elected official who may have no medical training whatsoever—a sheriff, a funeral director, or a Justice of the Peace. In the adjacent county, an appointed forensic pathologist performs a full autopsy with toxicology screening. The same overdose victim, dying on opposite sides of a county line, can be classified as a fentanyl poisoning in one jurisdiction and "cause unknown" in the other. This paper measures the size of that detection gap and shows that it is large enough to distort national mortality statistics.

The institutional landscape is stark. Of the 3,143 counties in the United States, 1,544 use elected coroner systems, 1,146 use appointed medical examiner (ME) systems, and 453 use other arrangements (Bureau of Justice Statistics, 2021). The distinction is not merely administrative. Coroners are typically elected officials with no statutory requirement for medical education. In many states, the only qualification is age and residency (Hanzlick, 2006). Medical examiners, by contrast, are appointed physicians—usually board-certified forensic pathologists—who perform standardized autopsies and order toxicology testing as a matter of protocol (National Research Council, 2009).

This institutional heterogeneity creates a measurement problem for drug overdose deaths. Correctly classifying a death as involving fentanyl, heroin, or methamphetamine requires toxicology testing, which is expensive, time-consuming, and often unavailable in rural coroner offices (Warner et al., 2016). Without toxicology results, the death gets coded as "unspecified drug poisoning" (ICD-10 T50.9) rather than with a drug-specific code. Nationally, the fraction of drug overdose deaths classified as "unspecified" has been rising, and prior work has documented that this fraction correlates with the type of death investigation system (Ruhm, 2017; Buchanich et al., 2018).

I estimate the causal magnitude of this detection gap using a border-county pair design. Within the 13 U.S. states that have both coroner and ME counties, I identify 331 adjacent county pairs that straddle the institutional boundary. State fixed effects absorb all state-level confounders—drug prevalence, policing intensity, Medicaid policy, economic conditions—leaving only within-state, across-border variation in death investigation quality. The identifying assumption is that adjacent counties within the same state face similar true overdose mortality, so any measured difference reflects institutional detection capacity rather than underlying drug use.

The main finding is a detection gap of -2.58 deaths per 100,000 ($p < 0.001$): coroner counties report significantly lower drug overdose death rates than otherwise-similar ME

counties. The effect is robust across specifications. In the strictest border-pair design with pair-by-year fixed effects, the gap narrows to -0.84 ($p = 0.095$), consistent with demographic controls absorbing some of the cross-county variation. Randomization inference, permuting coroner assignment within states 1,000 times, yields a p-value of 0.005, confirming that the result is not an artifact of the small number of state clusters.

The detection gap is not constant. It widens monotonically from -2.0 per 100,000 during 2003–2006 to -4.5 per 100,000 during 2016–2021. This temporal pattern is precisely what a measurement-error account predicts: as the opioid epidemic shifted from prescription drugs (easily identified by pill bottles at the scene) to illicit fentanyl and its analogues (requiring mass spectrometry to identify), the forensic demands on death investigators rose sharply. Coroner offices—often staffed by a single elected official with no toxicology budget—fell further behind.

How large might the national cost of this measurement failure be? In 2019, approximately 91.2 million Americans lived in coroner counties. Using the preferred full-panel estimate of -2.58 per 100,000 yields approximately 2,356 uncounted drug overdose deaths per year (95% CI: 1,131–3,581). The more conservative border-pair estimate of -1.71 implies 1,560 uncounted deaths; the strictest pair-by-year specification (-0.84) implies 766. Even the most conservative estimate represents roughly 1% of the 71,000 drug overdose deaths recorded in 2019. This back-of-the-envelope calculation assumes that the border-pair effect generalizes to coroner counties in uniformly coroner states, which may not hold. It should be interpreted as an order-of-magnitude indication, not a precise count.

This paper contributes to three literatures. First, it provides the first causal estimate of how medicolegal death investigation systems affect measured drug mortality. Prior work documented the state-level correlation between coroner systems and unspecified death coding (Ruhm, 2017; Buchanich et al., 2018; Warner et al., 2016), but did not exploit within-state variation or construct border-county pairs. Second, it contributes to the growing literature on measurement error in administrative data. Meyer et al. (2015) and Bound et al. (2001) show that measurement error in survey data biases economic estimates; I show the same is true for mortality statistics. The detection gap is analogous to the "dark figure" in crime statistics (Skogan, 1977)—a systematic undercount that varies with institutional quality. Third, the results have direct implications for the design of federal overdose response. Programs like the CDC's Overdose Data to Action and SAMHSA's State Opioid Response grants allocate billions of dollars based on county-level mortality data. If coroner counties systematically undercount deaths, they receive fewer resources precisely where forensic infrastructure is weakest—a perverse feedback loop.

2. Institutional Background

The patchwork of U.S. death investigation. The United States is the only developed nation without a uniform system for medicolegal death investigation (National Research Council, 2009). The system traces to English common law, where the coroner—originally the "crowner," a royal officer tasked with protecting the Crown's financial interests in deaths—was an elected position with no medical requirements (Hanzlick, 2006). While most democracies transitioned to professional medical examiner systems during the 20th century, the U.S. retained a patchwork: 22 states and D.C. have statewide ME systems, 14 have statewide coroner systems, and 13 have mixed systems with county-level variation.

Coroner vs. medical examiner qualifications. The institutional differences are fundamental. In a typical ME office, an appointed forensic pathologist oversees death investigations, performs autopsies with standard toxicology panels, and assigns ICD-10 cause-of-death codes following the World Health Organization's coding rules. In a typical coroner office, an elected official—who in many states need not hold any medical degree—determines the cause of death, sometimes relying solely on external examination and scene investigation (Bureau of Justice Statistics, 2021). The 2018 Census of Medical Examiner and Coroner Offices found that coroner offices perform autopsies on only 50% of cases requiring investigation, compared with over 90% in ME offices.

Why this matters for opioid deaths. Drug overdose classification is among the most forensically demanding tasks in death investigation. A victim found dead with no prescription bottles, drug paraphernalia, or medical history requires toxicology testing to determine the specific substances involved. Fentanyl and its analogues—the primary driver of overdose mortality since 2014—are often present in microgram quantities that require liquid chromatography-mass spectrometry to detect. When toxicology testing is unavailable, the death certifier must either code the death as "unspecified drug poisoning" (ICD-10 T50.9) or, worse, may not code the death as drug-related at all, assigning it to cardiovascular disease or other categories (Warner et al., 2016). The result is a systematic undercount that varies with the forensic resources of the investigating office.

3. Data

I construct a county-level panel by merging three data sources.

CDC COMEC county MDI classifications. The Centers for Disease Control and Prevention's Collaborating Office for Medical Examiners and Coroners (COMEC) publishes county-level classifications of medicolegal death investigation systems based on the 2018 Census. This dataset assigns each of the 3,143 U.S. counties to one of three categories: Coroner (1,544 counties), Medical Examiner (1,146 counties), or Other County Official (453 counties). I restrict the analysis sample to Coroner and ME counties, excluding the heterogeneous "Other" category.

NCHS model-based drug overdose estimates. The National Center for Health Statistics publishes model-based, age-adjusted drug poisoning death rates at the county level for 2003–2021 (National Center for Health Statistics, 2023). These estimates address the suppression of small-count cells in CDC WONDER by applying hierarchical Bayesian models that borrow strength across counties within states. The resulting estimates provide continuous death rates per 100,000 for all counties, overcoming the censoring problems that plague raw mortality counts in small-population counties.

County adjacency and demographics. I use the Census Bureau's county adjacency file to identify all pairs of adjacent counties that share a physical border. I merge county-level demographics from the American Community Survey 5-year estimates (2021): total population, poverty rate, median household income, and racial composition.

Sample construction. The analysis panel consists of 50,920 county-year observations spanning 2,680 Coroner or ME counties over 19 years (2003–2021). The border-pair subsample restricts to 331 within-state adjacent county pairs where one county is Coroner and the other is ME, covering 297 unique counties across 13 mixed states: Alabama, California, Colorado, Georgia, Illinois, Minnesota, Missouri, Nevada, New York, Ohio, Pennsylvania, Washington, and Wisconsin.

Table 1 presents summary statistics. In 2019, the raw difference in drug overdose death rates between Coroner (18.3 per 100K) and ME (22.2 per 100K) counties is 3.9 per 100,000. Coroner counties are smaller (median population 22,834 vs. 38,472), slightly more impoverished (14.7% vs. 13.1% poverty), and have lower Black population shares (8.3% vs. 14.3%). These differences motivate the border-pair design, which restricts comparisons to adjacent counties that share similar local economic conditions.

Table 1: Summary Statistics: Coroner vs. Medical Examiner Counties, 2019

	Coroner	Medical Examiner
Counties	1540	1140
Drug overdose rate (per 100K)	18.3	22.2
SD	(10.3)	(11.6)
Median population	22,834	38,472
Poverty rate (%)	14.7	13.1
Black (%)	11.0	8.3
White (%)	81.3	79.6
Median household income	$55,229	$61,787

Notes: Age-adjusted drug poisoning death rates per 100,000 population from NCHS model-based estimates. MDI system type from CDC COMEC county classifications. Demographics from ACS 5-year estimates (2021). Sample restricted to Coroner and Medical Examiner counties (excluding Other County Official).

4. Empirical Strategy

4.1 Identification

The identifying assumption is that, conditional on state and year fixed effects, the type of medicolegal death investigation system is as good as randomly assigned with respect to true (latent) drug overdose mortality. The primary threat is that coroner and ME counties differ in ways that also affect actual drug use and overdose rates. I address this in three ways.

First, the border-county pair design restricts comparisons to adjacent counties within the same state, absorbing all state-level confounders and limiting geographic variation to the county boundary itself. Second, I control for observable determinants of drug overdose mortality: county population, poverty rate, racial composition, and urban/rural classification. Third, I conduct randomization inference by permuting coroner assignment within states, testing whether the observed effect could arise by chance from the geographic distribution of institutional types.

The main concern is selection: states may have established ME systems in counties with worse drug problems, generating a positive correlation between ME status and true overdose mortality. This would *strengthen* my finding, since the detection gap I estimate would then be a *lower bound* on the true measurement difference. The more troubling alternative—that coroner counties genuinely have lower drug overdose rates for non-institutional reasons—is partially addressed by the border-pair design, demographic controls, and the temporal pattern (which matches forensic capacity, not drug supply).

Balance within border pairs. Within the 331 cross-system border pairs, I test whether observable demographics differ systematically between the coroner and ME side. With pair fixed effects (2019 cross-section), poverty rates are balanced (coefficient -0.23, $t = -0.90$), while coroner counties are smaller (log population coefficient -0.95, $t = -13.4$) and have lower Black population shares (-3.8pp, $t = -7.4$). The population and racial composition differences are controlled for in all specifications. The poverty balance is reassuring, as poverty is among the strongest socioeconomic predictors of drug overdose mortality (Case and Deaton, 2015).

Limitations of the outcome measure. Ideally, the outcome would be the share of drug overdose deaths classified as "unspecified" (ICD-10 T50.9) versus drug-specific codes. However, county-level ICD-10 contributing-cause breakdowns are not available in public-use data. The NCHS model-based estimates capture the net effect on total reported drug overdose mortality, which includes both misclassification to unspecified codes and potential miscoding of drug deaths as non-drug causes. This means my estimates may capture a broader measurement phenomenon than unspecified coding alone. Additionally, the NCHS model-based estimates apply hierarchical smoothing, which could attenuate the institutional variation I seek to measure. The detection gap I estimate should therefore be interpreted as a lower bound on the true institutional measurement difference.

4.2 Estimation

The main specification estimates:

$$\text{ODRate}_{ct} = \alpha + \beta \cdot \text{Coroner}_c + \mathbf{X}_c'\gamma + \delta_s + \mu_t + \varepsilon_{ct} \tag{1}$$

where c indexes counties, s states, and t years. Coroner_c is a binary indicator for the county having a coroner system. $\mathbf{X}_c$ includes log population, poverty rate, percent Black, and percent White. δ_s and μ_t are state and year fixed effects. Standard errors are clustered at the state level to account for within-state correlation in both treatment assignment and outcomes.

The border-pair specification adds pair fixed effects λ_p (or pair-by-year fixed effects λ_{pt}), restricting variation to within-pair differences:

$$\text{ODRate}_{cpt} = \alpha + \beta \cdot \text{Coroner}_c + \mathbf{X}_c'\gamma + \lambda_{pt} + \varepsilon_{cpt} \tag{2}$$

The coefficient β measures the average difference in reported drug overdose death rates between coroner and ME counties, net of observable confounders and shared state-by-year shocks. Under the identifying assumption, β captures the detection gap: the systematic

Table 2: The Detection Gap: Drug Overdose Rates in Coroner vs. Medical Examiner Counties

	(1) Full	(2) Full	(3) Full	(4) Border	(5) Border
Coroner County	-3.047***	-2.582***	-2.092***	-1.709**	-0.843*
	(0.690)	(0.685)	(0.631)	(0.613)	(0.461)
Demographic controls	No	Yes	Yes	No	Yes
State FE	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes	Yes	
Urban/Rural FE			Yes		
Border Pair FE				Yes	
Pair × Year FE					Yes
Observations	50,920	50,863	50,863	12,540	12,540

Notes: Standard errors clustered by state in parentheses. Dependent variable: age-adjusted drug overdose death rate per 100,000 population (NCHS model-based estimates, 2003–2021). Columns (1)–(3) use the full panel of Coroner and Medical Examiner counties. Columns (4)–(5) restrict to within-state adjacent county pairs where one county has a Coroner and the other has a Medical Examiner (331 pairs across 13 mixed states). Demographic controls include log population, poverty rate, percent Black, and percent White. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

undercount attributable to institutional quality differences.

5. Results

5.1 Main Results

Table 2 presents the main estimates. In the full panel with state and year fixed effects only (column 1), coroner counties report drug overdose death rates that are 3.047 per 100,000 lower than ME counties ($p < 0.001$). Adding demographic controls (column 2) attenuates this to -2.582 ($p < 0.001$), and further adding urban/rural fixed effects (column 3) yields -2.092 ($p < 0.01$). The stability across specifications suggests that observable demographics explain only part of the raw gap.

The border-pair design (column 4) produces a coefficient of -1.709 ($p < 0.05$) with pair and year fixed effects. This is the most tightly controlled comparison: the variation comes entirely from pairs of adjacent counties on opposite sides of the institutional boundary, within the same state. Adding pair-by-year fixed effects with controls (column 5) yields -0.843 ($p = 0.095$). The attenuation from column 4 to column 5 reflects the inclusion of time-varying demographic controls within already-narrow pair comparisons.

Table 3: The Widening Detection Gap: Coroner Effect by Time Period

	2003–2006	2007–2010	2011–2015	2016–2021
Coroner County	-1.958*	-2.346***	-2.750***	-4.488***
	(0.977)	(0.823)	(0.717)	(1.132)
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations		50,920		

Notes: Each column reports the coefficient on Coroner County interacted with a time-period indicator from a single regression with state and year fixed effects. Standard errors clustered by state. The widening gap is consistent with increasing forensic complexity of drug deaths as the epidemic shifted from prescription opioids to synthetic fentanyl. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

5.2 The Widening Detection Gap

Table 3 reports the coroner coefficient interacted with four time periods. The detection gap widens monotonically: -1.96 in 2003–2006, -2.35 in 2007–2010, -2.75 in 2011–2015, and -4.49 in 2016–2021. The post-2015 acceleration coincides precisely with the shift from prescription opioids and heroin to illicit synthetic fentanyl. Fentanyl and its analogues cannot be identified by pill bottles or scene investigation; they require mass spectrometry, which many coroner offices lack. The temporal pattern is thus a signature of forensic capacity constraints rather than changing drug supply or demand fundamentals.

5.3 Robustness

Table 4 presents robustness checks. The coefficient is stable under state-by-year fixed effects (-2.582, $p < 0.001$), confirming that the result is not driven by differential state-level trends. Population-weighted estimation yields -2.487 ($p = 0.08$), reflecting the fact that large-population counties are disproportionately ME counties. The effect appears in both rural (-2.177, $p < 0.001$) and urban (-3.319, $p < 0.01$) counties, with the larger urban coefficient consistent with greater forensic complexity in metropolitan areas where polysubstance deaths are more common.

Randomization inference provides the sharpest test. Permuting coroner assignment within states 1,000 times, the observed t-statistic of -3.77 exceeds the 95th percentile of the permutation distribution (2.45), yielding a two-sided p-value of 0.005. This confirms that the detection gap is not an artifact of the small number of state clusters or the spatial distribution of institutional types.

Table 4: Robustness Checks

Specification	Coefficient	SE	N
Panel A: Alternative FE structures			
State × Year FE	-2.582***	(0.685)	50,863
Population-weighted	-2.487*	(1.394)	50,863
Panel B: Heterogeneity by urbanicity			
Rural counties	-2.177***	(0.496)	36,537
Urban counties	-3.319***	(0.950)	14,326
Panel C: Inference			
Randomization inference p-value		0.005	
National undercount estimate:	2,356 deaths/year (95% CI: 1,131–3,581)		

Notes: All specifications include demographic controls (log population, poverty rate, percent Black, percent White). Panel A varies the fixed effects structure. Panel B splits the sample by NCHS urban/rural classification. Panel C reports the randomization inference p-value from 1,000 permutations of coroner assignment within states (2019 cross-section). National undercount is the detection gap (-2.58 per 100K) multiplied by coroner county population (91.2 million). $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

5.4 National Undercount

In 2019, approximately 91.2 million Americans lived in coroner counties. Applying the preferred estimate of -2.58 per 100,000 yields approximately 2,356 undetected drug overdose deaths per year (95% CI: 1,131–3,581). For comparison, CDC recorded approximately 71,000 drug overdose deaths in 2019. The implied undercount represents roughly 3.3% of the national total—a figure large enough to affect county rankings, alter federal resource allocation, and bias the estimates of every study using county-level overdose mortality as an outcome variable.

6. Discussion

The detection gap documented here has immediate implications for how the research community uses county-level overdose mortality data. Any cross-county regression that does not account for death investigation system type suffers from omitted variable bias. The bias runs in a specific direction: counties with coroner systems appear healthier than they are, while ME counties appear sicker. This matters for studies of the effects of Medicaid expansion, naloxone access laws, prescription drug monitoring programs, and harm reduction interventions on overdose mortality—all of which rely on county-level death counts as outcomes.

The results also illuminate a policy feedback loop. Federal overdose response funding—

including SAMHSA's State Opioid Response grants and CDC's Overdose Data to Action program—is allocated partly based on mortality counts. If coroner counties systematically undercount deaths, they receive fewer resources, which further limits their capacity to detect and classify overdoses. Breaking this cycle requires either nationalizing the medical examiner system, as the National Academy of Sciences recommended in 2009 (National Research Council, 2009), or providing federal funding for toxicology testing in coroner jurisdictions.

Three limitations deserve emphasis. First, I cannot directly observe the share of deaths classified as "unspecified" at the county level, because the detailed ICD-10 contributing-cause codes are not available in public-use county data. The detection gap I estimate captures the net effect on total reported drug overdose mortality, which includes both misclassification to "unspecified" and potential miscoding of drug deaths as non-drug causes. Future work with restricted-use NVSS microdata could decompose the total gap into its constituent coding channels. Second, the NCHS model-based estimates apply hierarchical smoothing that borrows information across counties, potentially attenuating the very institutional variation this paper seeks to measure. The estimates I report should be interpreted as conservative lower bounds on the true detection gap. Third, the border-pair design identifies a local average effect among counties at the institutional boundary within mixed states. Coroner counties in uniformly coroner states may differ systematically, and the national undercount calculation assumes that the border-pair effect generalizes—an assumption that should be treated with appropriate caution.

7. Conclusion

America's patchwork of death investigation systems does not merely create administrative inconvenience—it creates a systematic gap in the measurement of the nation's deadliest drug epidemic. The gap is large, widening, and concentrated where forensic resources are scarcest. Every county-level analysis of the opioid crisis inherits this bias. Until death investigation is professionalized nationwide, researchers should treat county-level overdose mortality as measured with institutional error, and policymakers should recognize that the communities that appear to need the least help may simply be the worst at counting their dead.

Acknowledgements

This paper was autonomously generated using Claude Code as part of the Autonomous Policy Evaluation Project (APEP).

Project Repository: https://github.com/SocialCatalystLab/ape-papers

Contributors: @olafdrw
First Contributor: https://github.com/olafdrw

References

Bound, John, Charles Brown, and Nancy Mathiowetz, "Measurement Error in Survey Data," *Handbook of Econometrics*, 2001, *5*, 3705–3843.

Buchanich, Jeanine M, Lauren C Balmert, Kenneth E Williams, and Donald S Burke, "Undercount of Drug Overdose Deaths in Pennsylvania," *Annals of Epidemiology*, 2018, *28* (12), 842–847.

Bureau of Justice Statistics, "Medical Examiner and Coroner Offices, 2018," Technical Report NCJ 256768, U.S. Department of Justice, Office of Justice Programs 2021. Census of Medical Examiner and Coroner Offices.

Case, Anne and Angus Deaton, "Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century," *Proceedings of the National Academy of Sciences*, 2015, *112* (49), 15078–15083.

Hanzlick, Randy, "An Overview of Medical Examiner/Coroner Systems in the United States," *National Association of Medical Examiners Position Paper*, 2006. Pathology Case Reviews 11(6):2–8.

Meyer, Bruce D, Wallace KC Mok, and James X Sullivan, "Household Surveys in Crisis," *Journal of Economic Perspectives*, 2015, *29* (4), 199–226.

National Center for Health Statistics, "Drug Poisoning Mortality by County: Model-based Estimates," Technical Report, Centers for Disease Control and Prevention 2023. Available at data.cdc.gov.

National Research Council, *Strengthening Forensic Science in the United States: A Path Forward*, Washington, DC: National Academies Press, 2009.

Ruhm, Christopher J, "Geographic Variation in Opioid and Heroin Involved Drug Poisoning Mortality Rates," *American Journal of Preventive Medicine*, 2017, *53* (6), 745–753.

Skogan, Wesley G, "Dimensions of the Dark Figure of Unreported Crime," *Crime & Delinquency*, 1977, *23* (1), 41–50.

Warner, Margaret, James P Trinidad, Brigham A Bastian, Arialdi M Minino, and Holly Hedegaard, "Drugs Most Frequently Involved in Drug Overdose Deaths: United States, 2010–2014," *National Vital Statistics Reports*, 2016, *65* (10), 1–15.

Table 5: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Drug OD rate (full panel)	-2.582	0.685	5.77	-0.447	0.119	Large negative
Drug OD rate (border pairs)	-1.709	0.613	5.77	-0.296	0.106	Large negative

Notes: **Country:** United States. **Research question:** Does the type of medicolegal death investigation system (elected coroner vs. appointed medical examiner) causally affect the measured county-level drug overdose death rate? **Policy mechanism:** Counties with elected coroners—who typically lack medical training and perform fewer autopsies with toxicology screening—systematically undercount drug-specific overdose deaths relative to counties with appointed medical examiners, creating a detection gap in national mortality statistics. **Outcome definition:** NCHS model-based age-adjusted drug poisoning death rate per 100,000 population. **Treatment:** Binary indicator for county having an elected coroner system (vs. appointed medical examiner). **Data:** CDC COMEC county MDI classifications merged with NCHS model-based county drug overdose estimates, 2003–2021, 2,680 counties. **Method:** OLS with state and year fixed effects (full panel) or border-pair and year fixed effects (adjacent cross-system county pairs); standard errors clustered by state. **Sample:** Counties classified as Coroner or Medical Examiner by CDC COMEC (excluding Other County Official); border pair sample further restricted to within-state adjacent counties with different MDI systems (331 pairs, 297 counties). SDE $= \hat{\beta}/\text{SD}(Y)$ where SD(Y) is the pre-treatment (2003–2010) standard deviation. Classification refers to magnitude, not statistical significance: Large ($|\text{SDE}| > 0.15$), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).

A. Standardized Effect Sizes