Constructing a longitudinal database of Targeted Regulation of Abortion Providers laws

Nichole Austin, PhD
Sam Harper, PhD

Department of Epidemiology, Biostatistics & Occupational Health, McGill University

Structured abstract

Objective: To build a longitudinal state-level database on targeted regulation of abortion provider (TRAP) laws.

Data sources: Primary sources included state websites, Lexis Nexis Quicklaw, and WestlawNext. We also relied on a range of secondary sources (including media reports and existing cross-sectional data) to pinpoint policy enactment and enforcement.

Study design: This was an iterative state-level review and compilation of data on TRAP shifts from 1973 to present.

Data collection: Two coders captured quantitative and qualitative data on TRAP policy activity and timing, focusing specifically on ambulatory surgical center (ASC) laws, admitting privilege requirements, and transfer agreements as these policies may pose significant compliance challenges to providers. Data were repeatedly cross-referenced and ultimately compiled to build a comprehensive record of state-level TRAP shifts over time.

Principal findings: According to our search results, 25 states had ever enacted an ASC, admitting privilege, or transfer agreement law. Fewer states (n=21) enforced these laws, and many currently face legal challenges.

Conclusions: TRAP laws are favored by many states as a way to regulate abortion provision, but the lack of longitudinal data on state-level policy shifts hinders our ability to quantify the impact of these laws beyond a single-state setting. These data can be used to better understand the impact of TRAP laws.

Key words: Abortion, supply-side policies, women's health?

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Background

Abortion provision in the US is largely determined at the state level, and restrictive policymaking is currently on the rise, with nearly a third of all existing abortion restrictions enacted in 2010 or later (1). In particular, supply-side regulations commonly referred to as targeted regulation of abortion provider (TRAP) laws have become commonplace, despite a seminal 2016 Supreme Court ruling (2) that may play a key role in overturning many existing policies. TRAP laws are unique in that they target abortion provision at the provider (rather than individual) level, which may ultimately lead to access barriers for abortion-seeking women. These laws are diverse, and some are more onerous than others. For example, laws requiring clinics to adhere to a state's regulations for ambulatory surgical centers (ASCs) may necessitate extensive and costly renovations. Admitting privilege requirements, which mandate that abortion providers hold admitting privileges at a nearby hospital (often within a specific proximity), may be impossible to secure when the nearest hospital is outside of this range or unwilling to extend these privileges.

Given these mechanisms, it is perhaps unsurprising that TRAP enactment has been linked to a decrease in provider availability, particularly when certain regulations are so severe that existing providers are simply unable to comply (1, 3). However, the relationship between these laws and subsequent health outcomes remains unclear. Despite the widely acknowledged safety of abortion as a medical procedure, TRAP advocates maintain that these laws protect women and reduce abortion-related complications by more stringently regulating providers and facilities (4). In contrast, TRAP opponents argue that the structural barriers imposed by these laws ultimately harm women by making it more difficult to access abortion, which could lead to changes in abortion rates, increased gestational age at presentation (which subsequently leads to more expensive and complicated procedures), and possibly increases in self-

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induced abortion (3, 5-6). A recent systematic review of quantitative evidence on the health effects of supply-side policies (7) found a general lack of evidence on this topic, although the available studies did suggest an inverse association between enforcement of certain TRAP laws and abortion rates. However, most of the publications in summarized evidence focused on a single state, and half of the studies assessed policy effects from 2006 or earlier, which does not capture important recent trends in TRAP enactment.

Identifying and rigorously documenting state-level shifts over time is a vital first step toward more accurately quantifying the impact of TRAP laws. Various sources of cross-sectional data exist on the presence/absence of these laws (8, 9), but no source to-date provides a sense of their timing. While this lack of data is a key barrier in conducting high-quality research on the causal impact of TRAP laws, accurately capturing state-level shifts in TRAP legislation is a challenging endeavor. We aimed to address this gap by building a longitudinal record of provider-focused supply-side abortion policy in the US. In this paper, which is intended as a companion piece to the data, we describe our approach and the strengths and limitations of the resulting dataset.

Methods

This was an iterative, state-by-state review of policy activity and policy timing. In early 2016, two coders systematically searched policy documents and a range of secondary sources to track state-level TRAP enactment and enforcement over time. Data were updated in July 2017 to reflect recent policy developments. We focused specifically on ASC laws, admitting privilege requirements, and transfer agreements (all described in **Table 1**), as the literature suggests that these policies may pose significant compliance challenges to clinics (1, 3).

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ASC laws were defined in our data as policies that explicitly required clinics to adhere to a state's ASC regulations. This exposure definition is slightly more conservative than that employed by the Guttmacher Institute, which considers whether a state's clinics have "structural standards comparable to those for surgical centers" (8). Our data therefore diverge from the Guttmacher Institute on states like Louisiana, which has specific guidelines for abortion facilities, but these facilities are explicitly exempted from the state's ASC licensing requirements (10). Admitting privilege laws were defined as laws requiring individual providers to obtain these privileges at a nearby hospital. Transfer agreement policies were defined as laws requiring clinics/facilities to enter into formal agreements with nearby hospitals. This is not the same as requiring clinics to have a written transfer protocol in place; this is an "in-house" policy, whereas a transfer agreement law requires the participation of two entities - the clinic and the hospital. We differentiated between the year of enactment and year of enforcement for all policies. If a state passed multiple laws within a given category, we coded the date of the first law. An example of this occurred in Texas, which passed two different ASC laws roughly 10 years apart; we describe this case in greater detail in the Results section.

[Insert Table 1]

Sources and process

We began by compiling a basic list of states in which one or more of the aforementioned TRAP laws were in place as of mid-2016, using the Guttmacher Institute's cross-sectional TRAP summary as a point of reference (8). We worked backwards from this list to determine the presence and details of each policy by state/year. Primary sources included state websites, Lexis Nexis Quicklaw, and WestlawNext. The two coders independently captured data on policy enactment/enforcement by state. These data were then cross-referenced, and disagreements were addressed collaboratively by revisiting data sources until consensus was reached.

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Although they were not always concordant among themselves, key resources for external cross-referencing included the Guttmacher Institute's summary of TRAP laws (as of August 2017) (8), a recent summary of TRAP enactment (also from the Guttmacher Institute) (11), a policy database compiled by the American Public Health Association (current as of November 2015) (12), and a media summary of admitting privilege laws by state (as of August 2014) (13). A final resource was released late in our data compilation process (9); these data, while also cross-sectional, were highly detailed and served as an important additional source of information. Finally, because the quality of records varied from state-to-state (and because some uncertainty is inevitable in this type of data collection endeavor), we included a numeric indicator of our coders' uncertainty in the interest of transparency and to facilitate sensitivity analyses and exclude states for which high-quality data were unavailable or unclear.

One of the central challenges in compiling these data was distinguishing between dates of enactment and dates of enforcement. We viewed this as a priority since analyses should ideally evaluate the impact of enforcement, which can potentially occur well after the enactment date of a policy for logistical, political, and/or legal reasons. We found that state-level policy documents did not always reflect policy timing; however, because abortion policy shifts are of considerable public interest and are closely monitored by agencies and advocacy groups across the ideological spectrum, we used media reports (from various sources) to corroborate our estimates of enforcement timing. An unexpected by-product of this process was the construction of a brief narrative component for each exposed state. This qualitative information, drawn in large part from media reports, was helpful both in providing context and in determining how best to code a given state policy.

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There were three key opportunities for error in compiling this dataset: errors in determining the presence of a policy, errors in determining the timing of a policy, and errors in accurately capturing the content of a policy. We revisited the dataset at the end of the coding process to check for differences between our data and the cross-sectional policy information published by various agencies/advocacy groups to check for discordance. We used any discordance as an opportunity to further examine our data sources and assess the reasons for discrepancies. This process allowed us to capture more nuanced instances of policy activity; for example, we found that a 2015 Arkansas law (which was enjoined, or temporarily blocked from going into effect, until mid-2017) mandated a fairly convoluted admitting privilege arrangement for physicians providing medication abortion only, which was unique.

It is important to remember that “TRAP” is a heterogeneous category: laws differ from one another, and laws within the same subcategory may differ substantially between states. For instance, in many states, ASC rules only apply to clinics providing abortion after the first trimester (the minority of all abortions). To document this heterogeneity, the policy dataset captures information on state-level policy presence, administrative codes associated with the law(s), year of enactment, year of enforcement, and the year a given law was blocked/enjoined (if applicable). We also captured indicators of severity, including whether an ASC law pertained to *all* abortions or only to later-term (generally second trimester) abortions, as well as the details of any associated proximity requirements for admitting privilege and transfer agreement laws. We retained the relevant state-level documents and saved them for reference, with relevant passages highlighted. The full dataset is available here for public use.

Results

Table 2 compactly summarizes the resulting data. According to our search results, 25 states had ever enacted an ASC, admitting privilege, or transfer agreement law, and 21 states went on to enforce these

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laws as of mid-2017. Only two states (Indiana and Missouri) were classified as “low confidence” states. While gestational age played a role in seven of the states with ASC requirements (with regulations only applying beyond a certain point of pregnancy - often the second trimester), the majority of ASC states applied these rules to virtually all providers. Notably, two states (Missouri and Virginia) extended their rules, which were initially for later-term abortions, to all abortions in recent years.

We illustrate the geographic and temporal distribution of these policies in **Figure 1**. It is clear from these maps that TRAP laws are most common in the Southeast and Midwest regions of the US (and many states in these regions had multiple laws in place as of mid-2017). These maps also reflect trends in policy timing: for instance, admitting privilege laws became quite common from 2011 onward, whereas many ASC regulations were enforced earlier. **Figure 2** illustrates the accumulation of these policies over time. Again, this plot reflects the enforcement of the first law in a given category so the total counts are conservative, but upward trends in policy enforcement are clearly apparent over the observation period and mirror the information provided by the maps (particularly with respect to a more recent surge in admitting privilege enforcement).

[Insert Table 2]

[Insert Figure 1]

[Insert Figure 2]

It is important to note that many states had complex legislative histories surrounding TRAP enactment and enforcement. If a state passed progressively stringent versions of a law over time, we documented this process but generally coded the passage of the first law as the date of exposure. For example, the Women’s Right to Know (WRTK) Act in Texas (enacted in 2003, enforced in 2004) required second-trimester abortions to occur in ASCs, but a more restrictive bill with an ASC component (HB2) was

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passed in 2013, although the ASC component never went into effect. Texas is therefore coded in the policy dataset as enforcing an ASC law in 2004.

The full dataset contains extensive information on state-level sources, proximity requirements, and qualitative information on the nuances of each policy (refer to **Appendix 1**). Qualitative/explanatory data also exist for several “unexposed” states, particularly in situations where our coding conflicted with another existing source. Concordance, however, was generally high: with respect to policy presence, our data agreed with one of the highest quality cross-sectional sources (9) 94% of the time for ASC laws, 88% of the time for admitting privilege laws, and 86% of the time for transfer agreement laws. Disagreements were usually easily explained and often linked to the period of review (for example, this particular data source was current as of mid-2016, but our data captured changes after that point).

Discussion

This study is the first to longitudinally track state-level shifts in specific types of TRAP legislation over time. Longitudinal data on TRAP activity will permit more rigorous analyses of both the potential health effects of exposure (e.g., changes in abortion rates and abortion-related complications) and the potential determinants of policy enactment and enforcement, which have been minimally studied to-date (14). These data can easily be merged with other datasets on abortion outcomes, provider availability, and sociodemographic attributes.

Our findings revealed considerable regional heterogeneity and interesting temporal trends in different types of TRAP laws. It is evident from these data that TRAP laws are common in the US, but the state-level circumstances surrounding the passage of a new law – in addition to the contents of the laws themselves – are nuanced and complex. Accounting for these nuances will be essential for accurately

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quantifying the impact of these laws: at the most basic level, differentiating between different types of TRAP laws, including their status (e.g., whether they were enacted or enforced), will ideally lead to a refined understanding of how these laws affect provider availability and population health outcomes, particularly as TRAP laws may impact provider availability and related outcomes even in the absence of formal enforcement (as observed in Texas following the enactment, but only partial enforcement, of HB2) (3). These data will also allow researchers to distinguish between subtle but potentially relevant aspects of certain laws: for example, depending on the analysis, one might want to differentiate between laws with strict and comparatively liberal proximity requirements.

There are certainly limitations to our approach, particularly with respect to uncertainty in precise policy timing (especially in states with complicated legislative histories). We aimed to minimize this by using a diverse range of sources and cross-referencing our findings with other available data. However, our findings were not perfectly concordant with any other source. This was unsurprising as existing sources are not concordant among themselves, due in large part to the complexity of these laws and differences in exposure definition. We aimed to be as transparent as possible in our exposure definitions, and we supplemented our data with qualitative state-level details to allow other analysts to understand our process (and potentially re-classify states for the purposes of their own analyses, depending on their objectives).

We devoted a considerable amount of time and energy to capturing the best possible data from a wide range of publicly-available sources, but an extension of this analysis might also consider contacting local providers and/or advocates for cases where the policy data are suboptimal. However, this approach may not resolve existing uncertainty, particularly in states where the publicly-available documentation is unclear. A number of states in our dataset received a confidence rating of 2, reflecting moderate (as

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opposed to high or low) confidence on the precise policy timing, and many of these states were the earliest enforcers. We caution readers that the comparatively early laws in this dataset (for example, ASC laws enforced in 1973) may not be “true” TRAP laws, in the modern sense of the term. According to our search, a few states appeared to have longstanding requirements that abortion providers adhere to ASC regulations. However, policies immediately following the federal legalization of abortion may not be the same as more recent TRAP laws: abortion provision was new in many states (abortion was completely illegal before *Roe v. Wade* in four out of six of the states with early laws (15)), and adding abortion providers to a state’s existing ASC regulations may have been a simple way for states to quickly define provider requirements. We therefore recommend that users of these data focus on more recent laws (for example, 1991-present).

TRAP laws may have a meaningful effect on provider availability and other outcomes (3), but there is relatively little information on the impact of these laws beyond the context of a single state. These data are an important step in better understanding the impact of supply-side abortion regulations on individual and population-level outcomes. By making these data and supporting documentation publicly available, we hope to stimulate additional high-quality research in this area.

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Table 1: Policy descriptions

Policy type	Description
ASC requirements	Many states subject abortion providers to the same regulations as ambulatory surgical centers. This type of legislation requires abortion providers to conform to strict facility and personnel guidelines. ASC requirements can apply to all providers or only to those providing abortion beyond a certain gestational age (often early in the second trimester). Regulations governing ASCs are extensive and generally unnecessary for abortion providers. ASC regulations may force existing providers to undergo extensive renovations or purchase unnecessary equipment, the costs of which may be insurmountable.
Admitting privileges	Admitting privilege laws require abortion providers to have hospital/admitting privileges in place at a nearby hospital (the proximity is often explicitly stated). Missouri was the first state to enact such a policy in 1986; these laws remained relatively rare until 2011. Several states successfully established these laws, but they were tied up in legal challenges in many other states. Notably, this was a focal point of <i>Whole Women vs. Hellerstedt</i> ; admitting privilege requirements for abortion providers were found unconstitutional, which has since resonated across other states with similar legislation. This does not, however, change the fact that these laws were in effect for a number of years in a number of states. Guttmacher (65) describes a “minimum admissions threshold” that is often part of gaining admitting privileges at a hospital; because the complication rate is so low with abortion, providers may be unable to satisfy this requirement and would therefore not be granted admitting privileges.
Transfer agreements	Transfer agreements are a common component of ASC regulations and require any ASC facility to have a written agreement in place with a nearby hospital in case of emergency. In contrast to admitting privilege requirements, transfer agreements are facility-level policies and are generally viewed as easier to secure. However, the American Public Health Association maintains that neither admitting privilege requirements nor transfer agreements are medically necessary for abortion providers; while hospitals have a legal obligation to provide emergency care to any patient, they do not have any legal obligation to extend admitting privileges or enter into formal transfer agreements with abortion providers (66). Several states allow clinics to get either admitting privileges or a transfer agreement; while this is certainly more flexible, neither measure is medically necessary.

Table 2: TRAP laws by state (as of mid-2017)*

State	ASC laws**				Admitting privileges ⁺			Transfer agreements ⁺⁺			Conf. [±]
	Tri.	Enacted	Enforced	Blocked	Enacted	Enforced	Blocked	Enacted	Enforced	Blocked	
AK	1	1970	1970	.	.	.	.	1970	1970	.	2
AL	.	.	.	.	2013	0	2014	.	.	.	1
AR	.	.	.	.	2015	0	2015	.	.	.	1
FL	.	.	.	.	2016	2016	.	2016	2016	.	2
GA	2	1974	1974	.	1974	1974	.	1974	1974	.	2
IL	2	1973	1973	.	1973	1973	.	1973	1973	.	2
IN	2	1973	1973	.	2011	2011	.	1973	1973	.	3
KS	1	2011	0	2011	2011	0	2011	2011	0	2011	1
KY	.	.	.	.	.	.	.	1998	1998	.	1
LA	.	.	.	.	2014	2014	2016	.	.	.	1
MD	1	2012	2012	.	.	.	.	.	.	.	1
MI	1	1999	1999	.	.	.	.	1999	1999	.	1
MO	1	2007	2007	2017	1986	1988	2017	2007	2007	2017	3
MS	2	2005	2005	.	2012	2013	2013	2012	2013	.	2
ND	.	.	.	.	2013	2014	.	.	.	.	1
OH	1	1999	1999	.	.	.	.	1999	1999	.	2
OK	.	.	.	.	2014	0	2014	.	.	.	1
PA	1	2011	2012	.	2011	2012	.	2011	2012	.	1
RI	2	1973	1973	.	.	.	.	.	.	.	1
SC	2	1995	1996	.	1995	1996	.	1995	1996	.	2
TN	1	2015	2015	.	2012	2012	.	2015	2015	.	2
TX	2	2003	2004	.	2013	2013	2016	.	.	.	1
UT	.	.	.	.	1998	1998	2017	1998	1998	2017	1
VA	1	2011	2012	.	.	.	.	2011	2012	.	1
WI	.	.	.	.	2013	0	2015	1976	1976	.	2

*Full dataset provides additional qualitative information on laws/codes, state-level nuances, and secondary sources. Dates reflect the first law within a given category: for example, Texas enacted a more stringent ASC law in 2013, but our data captures an earlier version that was specific to later-term abortions. **Laws explicitly require providers to adhere to state's ASC regulations. ⁺Laws require providers to hold admitting privileges at a nearby hospital. ⁺⁺Laws require a formal transfer agreement (not just a transfer plan) between providers and a nearby hospital. [±]Simple rating of coders' confidence in the listed dates, given the available data (1=high, 3=low). "Tri" reflects the trimester the ASC law takes effect (1=effective for first+ trimester abortions, 2=later abortions only).

Figure 1: TRAP laws by type and enforcement year