Washington State
Institute for
Public Policy

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WASHINGTON'S TRUANCY LAWS:

DOES THE PETITION PROCESS INFLUENCE SCHOOL AND CRIME OUTCOMES?

INTRODUCTION

In 1995, the Washington State Legislature passed a law known as the "Becca Bill."[1] In addition to providing for At-Risk Youth (ARY) and Children in Need of Services (CHINS) petitions,[2] the Becca Bill changed the compulsory school attendance laws. The bill requires that school districts file truancy petitions in juvenile court when students accumulate a specified number of unexcused absences. Prior to 1995, school districts had considerable discretion regarding the filing of truancy petitions. As a result of the new law, the annual number of petitions increased from 91 in 1994 to over 15,000 in 1997, and has remained around this number through 2008.

Truancy petitions are part of a larger process that includes mandated school interventions prior to filing and a court process that results from the petitions. The court process can include multiple hearings (initial, review, and contempt). If the student continues to be truant and is found in contempt of court, the law provides for several sanctions, including sending the youth to detention.

The 2008 legislature directed the Institute to study the implementation and costs of the truancy provisions of the Becca Bill.[3] The Washington State Institute for Public Policy (Institute) has recently published four reports regarding the costs to school districts and courts, a description of truancy and dropout prevention programs in Washington and a review of evidence-based practices to improve outcomes for youth (see last page for citations).

In this, the last paper in the series, we report on our analysis of outcomes for youth who received a truancy petition in Washington.

Summary

In 2008, the Legislature directed the Institute to study the truancy provisions of the 1995 "Becca Bill." The bill changed several aspects of the compulsory school attendance laws in Washington. In particular, the bill requires that school districts file truancy petitions in juvenile court when students accumulate a specified number of unexcused absences.

From a policy standpoint, it is of interest to know whether the Becca truancy laws have had a causal impact on key student outcomes, such as graduation rates.

Unfortunately, despite our best attempt to analyze this question with rigorous statistical methods, we cannot provide a scientific answer as to whether the law is having a positive, negative, or no effect on student outcomes. Sometimes research can provide answers to central questions, and sometimes it cannot; this is a case of the latter.

The 1995 Becca laws were implemented statewide and a random assignment study—the type of study offering the best scientific evidence—was never possible or envisioned. In addition, the historical data available for our study do not allow us to measure a vital aspect of the Becca laws: the number of unexcused absences from school. Without this information, it is impossible to employ appropriate statistical methods to study the question of the Becca Bill's effectiveness.

We do know from our analysis that students who receive truancy petitions are at very high risk of academic failure as well a future criminal involvement. For example, of all students in Washington during the 2002–03 school year, only 20 percent of students with petitions graduated from high school by 2008, compared with 77 percent of their non-petitioned peers. Similarly, 20 percent of the students with petitions were subsequently convicted of a crime in Washington compared to 4 percent of students without petitions.

Our inability to analyze the effectiveness of the Becca Bill stems from that fact that, even before their truancy filing, petitioned student were already at much higher risk for bad outcomes. For example, prior to receiving the truancy filing, petitioned youth had a GPA of just 1.3, compared with a GPA of 2.7 for non-petitioned students. And, prior to the filing, 31 percent of the petitioned students had previously been convicted of a crime compared with 8 percent of non petitioned students.

Given these differences, and without additional information, it is not possible to identify an appropriate comparison group with which to judge—in a scientifically rigorous way—whether the Becca Bill has had the effects the Legislature intended.

[1] E2SSB 5439, Chapter 312, Laws of 1995

[2] At-Risk Youth and Children In Need of Services are programs for juveniles who exhibit behaviors that create a "serious risk of harm to the child or others" and are "beyond the control of their parents" (for more details, see RCW 12.32A.030).

[3] ESHB 2687, Sec. 610 (19), Chapter 329, Laws of 2008

For this study, we chose to examine outcomes for all students enrolled in Washington's public high schools during the 2002–03 school year, rather than a sample. This approach offered greater statistical power for the analysis.

Study Language From the 2008 Legislature
ESHB 2687, Sec. 610 (19)
Chapter 329, Laws of 2008

(a) The institute shall:

(vi) analyze the academic impact of RCW 28A.225.030 by sampling school districts' student academic records to ascertain the students' post-petition attendance rate, grade progression, and high school graduation for students where the school district filed a truancy petition in superior court.

BACKGROUND

Washington's truancy laws seek to keep children in school by establishing a specific process that the schools must follow, which includes various interventions. These interventions are outlined in Exhibit 1.

The truancy laws require that schools must notify parents after one unexcused absence. After two unexcused absences, schools are required to respond with a parent conference and individualized interventions for the student and his/her family.[4] A district *may* file a truancy petition with the courts after five unexcused absences in a month, but *must* file after seven unexcused absences in one month or 10 unexcused absences in a year.

The court then determines whether the necessary legal conditions[5] have been met. If so, the court assumes jurisdiction, and the student is usually ordered to attend school.[6]

A student who continues to be truant is in contempt of the court order. If a contempt motion is filed (by the district or court), "coercive civil sanctions," including parental fines, child detention, and community service, may ensue. Due to the possibility of secure detention, a lawyer is offered to youth who reach this stage in the process.[7] Depending on the court, youth found in contempt may be sentenced to detention, or a detention alternative such as community service or electronic home monitoring.

While the truancy laws lay out a step-by-step process for districts and courts to follow when students have unexcused absences, many details are not specified. For example, districts have discretion over the definition of truancy, attendance monitoring, approaches to intervening with youth before filing petitions, and the type and number of district employees involved in court hearings. Likewise, the courts may decide how to structure hearings (number and type), strategies to avoid hearings, such as attendance workshops and the provision of case management or other services.

In two previous papers in this series, we found wide variation in the ways the school district and courts have implemented the truancy provisions of the Becca Bill.[8]

The legislature has been interested in the effect of requirement to file truancy petitions since the Becca Bill became law in 1995. Twice before, the legislature has asked the Institute to investigate the effects of the law.

A 2000 report[9] found that in Seattle Public Schools, the act of filing a petition had no effect on whether those students remained in school. There was some evidence that the increased filing of petitions served as a deterrent to other students. District-wide, the average number of unexcused absences declined in the period following implementation of the law.

[4] These interventions include, "where appropriate, adjusting the child's school program or school or course assignment, providing more individualized or remedial instruction, providing appropriate vocational courses or work experience, referring the child to a community truancy board, if available, requiring the child to attend an alternative school or program, or assisting the parent or child to obtain supplementary services that might eliminate or ameliorate the cause or causes for the absence from school" (RCW 28A.225.020).

[5] RCW 28A.225.035

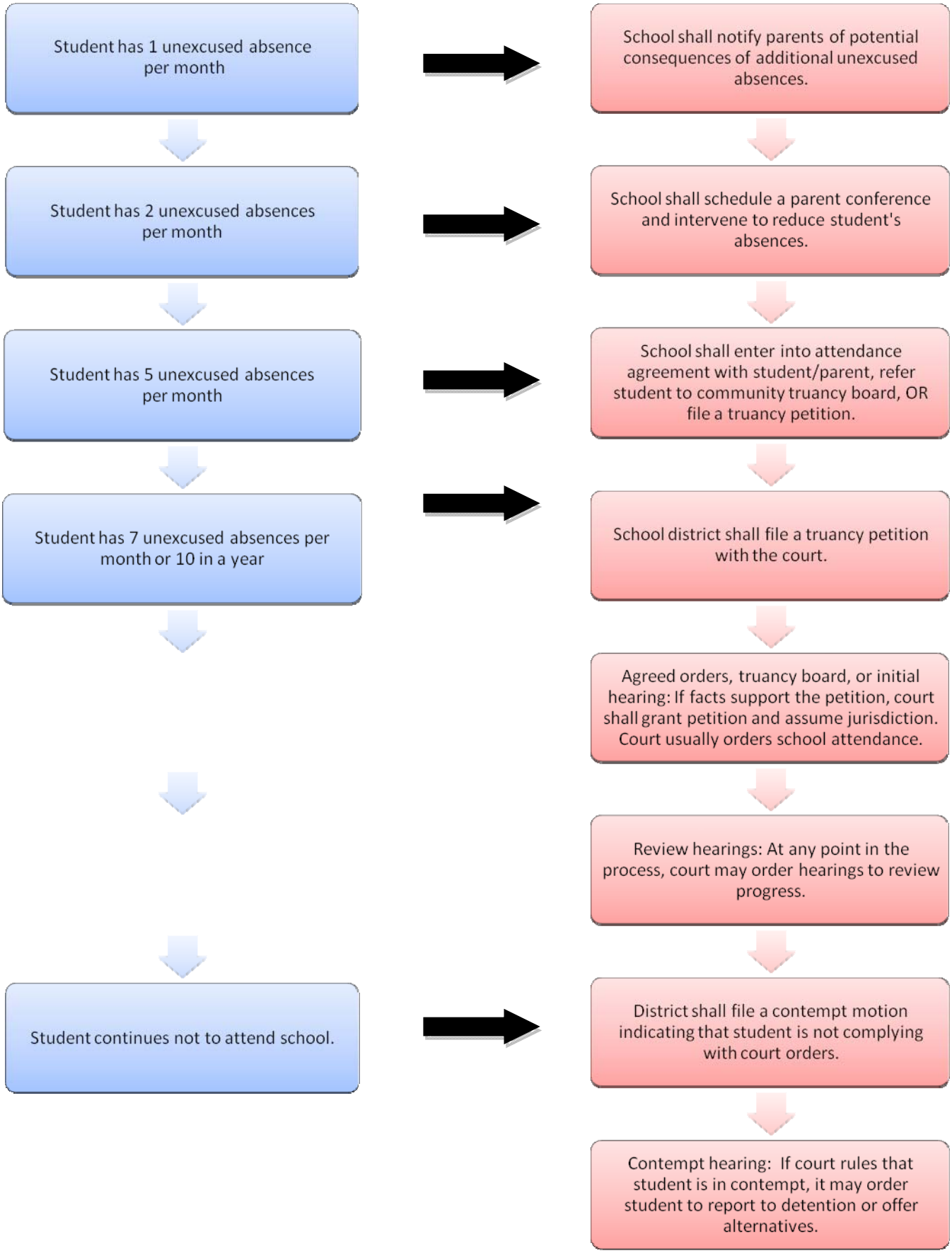
[6] The student may also be ordered to undergo drug and alcohol testing (RCW 28A. 225.031) or be referred to a community truancy board (RCW 28A. 225.035).

[7] An individual has the right to counsel when an adjudication may result in incarceration (*State ex rel. Schmitz v. Knight*, 142 Wn. App. 291, 293 [Wash. Ct. App. 2007]). In a recent Court of Appeals case (*Bellevue School District v. ES*, No. 60528-3-I [Wash. Ct. App. 2009]), it was ruled that youth with a truancy petition are entitled to a lawyer even at the initial hearing. The impact of this ruling on court practices as they pertain to truancy cases is yet to be determined.

[8] T. Klima, M. Miller, & C. Nunlist (2009). *Washington's truancy laws: School district implementation and costs.* Olympia: Washington State Institute for Public Policy Document No. 09-02-2201; and M. Miller, T. Klima, & C. Nunlist (2009). *Washington's truancy laws in the juvenile courts: Wide variation in implementation and costs*. Olympia: Washington State Institute for Public Policy, Document No. 09-10-2201.

[9] M. Burley (2000). Assessing the impact of Washington's truancy petition process: An exploratory analysis of the Seattle School District. Olympia: Washington State Institute for Public Policy, Document No. 00-09-2201.

Exhibit 1
Summary of Washington's Truancy Petition Process



A second Institute[10] report found the truancy provisions of the Becca Bill appeared to result in increased high school enrollment in Washington State.

How do other states respond to truancy?

We conducted a brief survey of 43 states and the District of Columbia, inquiring about the compulsory school attendance laws. While in some states schools refer truant students to children and family services departments, in many other states, schools have the option to file civil charges against the student or the parent. In only three others (Nebraska, Oklahoma, and Texas) was the approach similar to Washington's in requiring school districts to initiate a court case after a specified number of unexcused absences.

METHODS

Data

Our charge for this report was to study the outcomes for students who received a truancy petition. Due to changes in the way the Office of Superintendent of Public Instruction (OSPI) collects student information, attendance data was available only for the 2002–03 and 2003–04 school years. We chose to focus on the cohort of students in high school in 2002–03 so that we could observe attendance the following year.

The laws requiring districts to file petitions have remained unchanged since 1999 so, although we would have preferred a more recent cohort, we do not expect that the petition process was altered in any fundamental way before 2009.

We did not include middle school students because attendance data were not available for that age group for these years. As we reported in an earlier paper,[11] 21 percent of youth receiving petitions were 13 or younger at the beginning of the school year. Thus, our focus on high school includes roughly 79 percent of youth receiving petitions.

Using data from the Superior Court Management Information System (SCOMIS), we identified all youth with truancy petitions filed during the 2002–03 school year.[12] We further identified all youth with criminal convictions who were between the ages of 13 and 19 at the beginning of each of these school years. OSPI then matched the students in our truancy and juvenile justice samples to confidential school records. Thus, our dataset for analysis included all students with records in the OSPI research database[13] in Washington's public high schools, with indicators for truancy petitions and criminal justice involvement. A more complete description of our methods is provided in Appendix.

Outcomes

We examined the relationship between truancy petitions and the following outcomes:

- Dropping out of school
- Days of attendance in the following school year
- Transferring schools
- On-time graduation
- Graduation or GED by June 2008
- Convictions for future crime (in the following four years)

Study Approach

In order to understand how truancy petitions affected the outcomes for the group of youth who received petitions, it was necessary to compare their outcomes to those for a group of <u>similar youth</u> who did not receive a petition.

The 1995 Becca laws were implemented statewide and a random assignment study—the type of study offering the best scientific evidence—was never possible or envisioned. Had there been a pilot study that randomly assigned eligible students to petition or no-petition status, our study would have been more clear-cut. We could have then have been able to attribute any difference in outcomes of these groups to the petition. In the absence of an experimental design, it was necessary to identify a group of non-petitioned youth who were very similar to petitioned youth.

[10] S. Aos (2002). Keeping kids in school: The impact of the truancy provisions in Washington's 1995 "Becca Bill." Olympia: Washington State Institute for Public Policy, Document No. 02-10-2201.
[11] Klima, Miller, & Nunlist, C., 2009.
[12] That is, truancy petitions filed between September 1, 2002 and August 31, 2003.
[13] In order to comply with the Family Educational Rights and Privacy Act (FERPA), OSPI created data files for researchers that replace student identifiers with a numeric research ID. In 2002-03, not all students had research IDs. Our analysis data set consisted of 86 percent of all students in Washington's public high schools.

We will show that students who were the subjects of petitions were among the most at-risk of school failure and criminal involvement. Because petitioned youth were at extreme risk for undesirable outcomes, the challenge in this analysis was to identify a group of students with similar characteristics to use as a comparison group. This endeavor was further complicated by the fact that school districts exercise considerable discretion in their decision to file petitions on truant students. Using the OSPI data available to us, it was often unclear why one youth with excessive absences received a petition while a similar student in the same district did not.

We tried many analytical approaches to identify a similar comparison group (described in Appendix A2). In the end, we were unable to identify an appropriate group of students to use for comparison to students who received petitions.

FINDINGS

Who Are the Students Who Receive Petitions?

Two percent of high schools students received a truancy petition in 2002–03.[14] Characteristics of petitioned and non-petitioned students are described in Exhibit 2. Students who received truancy petitions differed significantly from their peers not receiving petitions. Compared with all other high school students (column3), students with a truancy petition (column 2) were significantly more likely to be over-age for their grade, have a lower grade point average (GPA) and be absent for more days. In addition, petitioned youth were more likely to be low income as indicated by receipt of free or reduced price lunch and to be members of a racial or ethnic minority. These characteristics are associated with poorer academic outcomes in Washington State.[15] Students with petitions were also more likely to have been convicted of a crime committed before the 2002–03 school year and more likely to have committed a crime during the year.

We also compared students with a petition with the portion of non-petitioned students who were absent more than 20 days in 2002–03 (see column 4 in Exhibit 2). While we cannot know whether all of these absences were unexcused,[16] we consider this an excessive number of absences. Characteristics of students with excessive absences—whether they result in a truancy petition or not—are associated with factors indicative of poorer performance in school[17] and increased risk of future criminal involvement.

[14] According to the OSPI truancy report (*Report to the Legislature on 2002-03*: *Truancy,* http://www.k12.wa.us/Truancy/LegisRpt02-03/Truancy2002-03.pdf), 2.5 percent of public high school students received a petition in 2002-03. However, OSPI was able to provide us with research IDs for 86 percent of all students and for 68 percent of students with truancy petitions. Two percent of student in our analysis data set received truancy petitions.

[15] W. Cole, & R. Barnoski (2007). *Tenth-grade WASL results in spring 2006:Association between poverty and WASL performance by race/ethnicity*. Olympia: Washington State Institute for Public Policy, Document No. 07-01-2205.

[16] OSPI does not collect student-level information on the number of unexcused absences. Thus we know only the number of days absent during the school year.

[17] Cole & Barnoski, 2007.

Exhibit 2
High School Students With and Without Truancy Petitions in 2002–03

Student Characteristic [1]	Students With Truancy Petitions (N=5,376) [2]	Students with No Truancy Petition in 2002-03	
		All Students With No Petition (N=268,661) [3]	Students With No Petition But Absent Over 20 Days (N=36,688) [4]
Gender			
Male	52%	51% (ns)	48%
Female	48%	49% (ns)	52%
Ethnicity			
American Indian	6%	3%	5%
Asian	5%	7%	5%
Black	7%	5%	8%
Hispanic	12%	8%	11%
White	69%	77%	71%
Ever Received Free/Reduced Price Lunch			
	57%	30%	45%
Grade			
9	45%	28%	29%
10	31%	26%	24%
11	20%	25%	25%
12	4%	21%	22%
Over-age for grade	35%	22%	31%
Criminal Conviction for crime:			
Before 2002–03	31%	8%	17%
During 2002–03	21%	3%	8%
Before or during 2002–03	42%	10%	21%
Days Absent in 2002–03			
	34.9	10.6	37.5
Cumulative GPA Through 2002–03			
	1.3	2.7	2.0

Unless specified "ns," all results are significantly different from students with truancy petitions at $p \leq 0.05$ in a two-tailed test of significance.

What Are the Outcomes for Petitioned Youth?

We focused on student outcomes following the 2002–03 school year. A summary of these outcomes is provided in Exhibit 3.

As a group, outcomes for youth receiving a truancy petition were significantly less desirable than outcomes for non-petitioned youth. Compared with their non-petitioned peers, youth with petitions:

- Had higher drop-out rates
- Had worse attendance in the following year
- Committed more crimes in the four years following the 2002–03 school year
- Transferred schools more often

Perhaps most striking, youth with petitions were significantly less likely to graduate. *Only 13 percent graduated on time and 25 percent had graduated or attained a GED by June 2008*.

Even compared to non-petitioned students with excessive absences, petitioned students were significantly less likely to graduate and more likely to commit crimes in the following years.

Exhibit 3
Outcomes for Students Attending Public High Schools in Washington State in 2002–03

Student Characteristic [1]	Students With Truancy Petitions (N=5,376) [2]	Students With No Truancy Petition in 2002–03	
		Students With No Petition (N=268,661) [3]	Students With No Petition But Absent Over 20 Days (N=36,688) [4]
Dropped Out in 2002–03	13%	5%	11%
Days Attended in 2003–04‡	90.0	147.0	107.7
Transferred in 2002–03	29%	7%	15%
Graduated on time	13%	71%	43%
Graduated by June 2008	20%	77%	51%
GED by June 2008	5%	1%	2%
Graduated or GED by June 2008	25%	78%	54%
Criminal Conviction after 2002–03	20%	4%	8%

Unless specified "ns," all results are significantly different from students with truancy petitions at $p \leq 0.05$, in a two-tailed test of significance.
‡ Students who were in grade 12 in 2002–03 were omitted from attendance measures in 2003–04. Students who dropped out of school in 2002–03 were coded as attending zero days in 2003–04.

It is clear that students receiving petitions are among the most at risk for poor school outcomes and future criminal involvement. The question that arises, of course, is whether the different outcomes shown in Exhibit 3 are "caused" by the petition or whether the petition is in itself another negative outcome caused by other factors.

Unfortunately, while we tried many statistical approaches to study this question (described in the appendix), we were unable to identify a group of students to serve as a comparison group. It seems apparent that districts consider other issues not recorded in information reported to OSPI. For example, OSPI does not collect individual student information on the number of unexcused absences. Further, OSPI does not maintain student-level records of disciplinary action or information on other efforts made by the schools and districts on behalf of struggling students.

Thus, given the data available for this study, we cannot conclude how—or if—truancy petitions affect outcomes for petitioned youth.

For students who received petitions, did outcomes vary by district filing rates or court processing?

In earlier papers in this series, we described a wide range of approaches by school districts and courts to implementing the truancy provisions of the Becca bill. For example, in 2006–07, 32 percent of students who accumulated 10 or more absences received petitions statewide. But the percentage varied widely among districts—from zero percent in some school districts to 100 percent in others. Likewise, in the courts, the average number of hearings per case ranged from 0.1 hearing per truancy case to in excess of six hearings. We wondered whether the various approaches—aggressive petition filings by some districts and/or intensive case processing in some courts (that is, average number of hearings plus arrests per case in each court) might influence outcomes for petitioned youth.

In this analysis, we controlled for all available student characteristics plus school district truancy rates (petitions filed as a percentage of students with 10 or more unexcused absences) in 2002–03, high school enrollment in the district, and crime rate in the county during 2002.[18]

We found no relationship between district filing rate or court intensity[19] on the four outcomes we analyzed: dropping out of school, days attended the following year, on-time graduation, and future crime. That is, we found no association between district

[18] Washington State Statistical Analysis Center, Uniform Crime Report Query, retrieved from: http://wa-state-ofm.us/UniformCrimeReport/
[19] Average number of hearings per truancy case in each court plus average number of arrests per truancy case. Based on analysis of SCOMIS data for cases filed during the 2002–03 school year.

filing rates—or the average number of hearings plus arrests in the court—and these outcomes. Thus, we cannot identify a "best" approach for improving outcomes for truant students. We are unable to say that outcomes for petitioned students are more positive in districts with high filing rates or low filing rates. Likewise, we do not know whether having many hearings—compared with few hearings—affects student outcomes for better or worse.

Does the petition process encourage non-petitioned youth to remain in school?

Our analysis here focused primarily on students who received petitions. Although we can draw no conclusions about the effects for students who receive truancy petitions, it is possible that the process of filing petitions for some students might encourage others to attend and to remain in school. Indeed, two Institute reports written in the years immediately following the Becca laws found association between petition filings and decreased unexcused absences and increased high school enrollment.

To determine whether those earlier preliminary results still hold, we repeated our 2002 analysis[20] of high school enrollment, using an expanded time period. We analyzed county-level data for 1992 (three years before the Becca Bill was implemented) through 2007. Using data for this longer period of time and an improved statistical method, we no longer see a statistically significant relationship between petition filings and high school enrollment.[21]

CONCLUSIONS

Statewide, school districts filed truancy petitions for 2 percent of high school students in 2002–03. These students were among the most at-risk of poor educational outcomes and future involvement in the criminal justice system.

Compared with their non-petitioned peers *with or without excessive absences in the same year*, students receiving a petition were more likely to have the following negative outcomes:

- Higher drop-out rates
- Lower on-time graduation rates
- Lower rates of graduation or GED by 2008
- More criminal justice involvement

Because districts select the most at-risk students to receive petitions, we were unable to identify an appropriate comparison group for youth receiving petitions. Therefore, we cannot know what effects—if any—the petitions had on outcomes for youth. That is, Washington's truancy laws could be exerting a positive, negative, or no effect on student outcomes; unfortunately the data available for this study do not allow us to draw definitive conclusions.

An earlier Institute report found that the increase in petitions following enactment of the Becca Bill appeared to increase high school enrollment in Washington. However, an update of that analysis, using a longer time period and an improved statistical method, no longer shows a statistically significant relationship between petition filling and enrollment.

[20] Aos, 2002.
[21] See Appendix A1.5 for a full description of this analysis.

TECHNICAL APPENDIX

A1. Methods

A1.1 Data Sources. This study used data from four sources:

1) Superior Court Management Information System (SCOMIS). The Administrative Office of the Courts provided the Institute with electronic data, including docket records, for all truancy cases. We identified all youth with a truancy petition filed in the 2002–03 school year; that is, we identified all petitions filed between Sept 1, 2002 and Aug 31, 2003.

   For cases filed in the year, we determined the average number of hearings per case by court.

2) Washington State Institute for Public Policy's recidivism data base.

   Using (the above referenced sources) we identified ALL youth (not just those with a truancy petition) who were between 13 and 18 years of age during the 2003–03 and 2003–04 school years. For each youth, we identified convictions and the associated dates of the crimes.

3) Office of Superintendent of Public Instruction (OSPI) school enrollment data (P-210). These data provided demographic information in addition to enrollment status, and indicators of bilingual student, free or reduced price lunch, grade point average (GPA), and days enrolled and days attended during each school year. The federal Family Education Rights and Privacy Act (FERPA) changed the way data can be made available for research purposes. No information is available that would allow a researcher to identify individual students. In response to this law, OSPI assigns unique IDs to student records. These de-identified data are then made available for research, given specified confidentiality agreements. OSPI began assigning these numbers in 2004, working retroactively; however, prior to 2002–03, only a small fraction of student records contain research IDs. Due to changes in the way OSPI records data, attendance information was available only for the 2002–03 and 2003–04 school years.

4) This combination of the assignment of research IDs and limited attendance data meant that the most recent school year we could investigate was 2002–03 and that we could not look later than 2003–04. Given that we were interested in high school graduation, we were limited to students who were in high school. We chose to focus on the cohort of students in high school in 2002–03 so that we could observe how the truancy petition affected attendance in the following year.

A1.2 Merging and constructing the analytical data set. Individual data for youth with a truancy petition were matched to criminal records. Thus, for each youth in the criminal data set, it was possible to flag those who also received a truancy petition.

Because OSPI may not release identified student information, the practice is for researchers to supply student identifiers (such as name, date of birth, and gender) to OSPI. OSPI then matches to student records, attaches the research ID and then strips the student identifiers before returning the data set to researchers. In this case, another issue was preserving the confidentiality of juvenile criminal records. Our approach was to send OSPI three data files.

1) A file containing identifiers and a randomly generated unique ID created by the Institute. If available in the court records, the youth's school district was also included.
2) A file containing criminal charges and the unique ID created by the Institute.
3) A file containing court information on truancy cases and the unique WSIPP ID.

OSPI matched the identifiers against student records, stripped the WSIPP id and attached the OSPI research ID to all records in the identifier file. Then the WSIPP ID was replaced with the research ID in the criminal and truancy files. Finally, these three modified files were returned to WSIPP.

We calculated the days absent during 2002–03 by subtracting days in attendance from days enrolled as reported in the OSPI P-210 table.

A1.3 Identifying academic outcomes.

1) Attendance in 2003–04. The OSPI data provided information on days in attendance in the 2003–04 school year. In order to account for the students who dropped out before 2003–04, students who dropped out were assigned a value of zero days for that school year.
2) Graduation. We used the enrollment status field in the OSPI P210 data. Students who graduated in their expected graduation year (assigned to students when they began 9th grade) or before that that year were considered to be on-time graduates.
3) General Educational Development Certificate (GED). GED attainment is coded in the enrollment status field.
4) Dropped out in 2002-03. We used the method described for us by OSPI. Students were considered drop out if the enrollment status at the end of 2002-03 indicated:
    - Dropout
    - GED
    - Unknown status

    However, youth designated as dropouts in the 2002–03 status who were listed as enrolled in 2003–04 were not considered dropouts.

A1.4 Estimating effects of truancy petitions on high school enrollment: 1992 through 2007. In 2002, the Institute published an analysis indicating that the truancy provisions of the Becca Bill were associated with increased rates of enrollment in public and private high schools.[22] We repeated the analysis for this report, using a longer time period and improved modeling: 1992 through 2007. We obtained the following statistics for each of Washington's 39 counties for each year over the period 1992 through 2007:

- OSPI information on enrollment in grades 10, 11 and 12 in the public and private schools.
- Petitions filed
- Becca dollars reimbursed to each county
- Population of youth 15 through 17 years of age
- Population of youth 10 to 17 years of age

We calculated a truancy filing rate based on the number of petitions filed each year divided by the population aged 10 to 17.

We first examined the data series for unit roots. If unit roots are present, then a simple regression in levels can produce spurious results. We tested for unit roots with the Im, Pesaran and Shin (IPS) panel unit root test for individual unit root processes. For the log of the enrollment rate series, the IPS test without time trends nearly rejected the null hypotheses that the series has a unit root (IPS p-value of .0544). With time trends included, the IPS test rejected the presence of a unit root (IPS p-value .0024). In first differences, the IPS test indicated a lack of a unit root (IPS p-value .000). For the log of the filing rate series, the IPS test without time trends clearly did not reject the null hypotheses that the series has a unit root (IPS p-value of .9966). With time trends included, the IPS test did not reject the presence of a unit root (IPS p-value .9994). In first differences, the IPS test indicated a lack of a unit root (IPS p-value .000). For the log of the Becca dollars series, the IPS test without time trends clearly rejected the null hypotheses that the series has a unit root (IPS p-value of .9211). With time trends included, the IPS test did not reject the presence of a unit root (IPS p-value 1.000). In first differences, on the other hand, the IPS test indicated a lack of a unit root (IPS p-value .000).

Because the unit root tests indicated the presence of unit roots in at least some of the variables, and because of a lack of unit roots in first differences, we proceeded to estimate a model in first difference. Our analytical model took the following form. We used a two-step analysis referred to as an "instrumental variables" approach. In the first step, the year to year change in the log of dollars reimbursed to counties was used, along with county and time fixed effects, to estimate the year to year change in the log of the petition filing rate.

$$\ln(TFrate1012)_{ct} - \ln(TFrate1012)_{ct_{-1}} = \beta_0 + \beta_1(\ln(BECDOL)_{ct} - \ln(\mathrm{BECDOL})_{ct_{-1}} + \phi C_c + \delta T_t + \varepsilon_{ct}$$

In the second stage, the change in the log of the instrumented filing rate, along with county and time fixed effects, was then used to analyze the year-to-year change in enrollment rates. Two-stage least squares was then used to estimate the model.

$$\ln(Erate1012)_{ct} - \ln(Erate1012)_{ct-1} = \beta_0 + \beta_1(\ln\left(\widehat{TFrate}\right)_{ct} - \ln\left(\widehat{TFrate}\right)_{ct_{-1}}\right) + \phi C_c + \delta T_t + \varepsilon_{ct}\, TFrate$$

Where:

$\ln(Erate1012)_{ct}$ is the log of enrollment in grades 10 through 12 divided by the population aged 15 through 17.
$\ln(TFrate)_{ct}$ is the log of the filing rate calculated as petitions per year divided by the population of children 10 through 17.
$\ln\left(\widehat{TFrate}\right)_{ct}$ is the estimated log of the filing rate predicted by the first stage equation.
$\ln(BECDOL)_{ct}$ is the log of the Becca dollars reimbursed to each county.
C and T are county and year fixed effects.

[22] Aos, 2002.

The following results were obtained:

Dependent Variable: LOG(ERATE1012)-LOG(ERATE1012(-1))
Method: Panel Two-Stage Least Squares
Date: 02/03/10 Time: 15:15
Sample: 1992 2008
Periods included: 17
Cross-sections included: 39
Total panel (balanced) observations: 663
White diagonal standard errors & covariance (d.f. corrected)
Instrument specification: C (LOG(RBECDOL10172)-LOG(RBECDOL10172(-1)))

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.074719	0.313099	-0.238644	0.8115
LOG(TFRATE2)-LOG(TFRATE2(-1))	0.182106	0.804071	0.226480	0.8209

Effects Specification

Cross-section fixed (dummy variables)
Period fixed (dummy variables)

R-squared	-22.472904	Mean dependent var	-0.003881
Adjusted R-squared	-24.599773	S.D. dependent var	0.045109
S.E. of regression	0.228237	Sum squared resid	31.61981
F-statistic	0.925764	Durbin-Watson stat	2.456631
Prob(F-statistic)	0.628250	Second-Stage SSR	1.242825
Instrument rank	56		

Using this longer time period and a first difference model, we no longer find a significant effect of truancy petition filings on high school enrollment (p=.8209). The sign remained positive, but the results were not close to statistical significance.

A1.5 Survey of other states

We attempted to make telephone contact with the departments of education in each of the 50 states and the District of Columbia regarding the laws in those states relating to truancy. We focused on whether state law required districts to petition the courts when youth accumulated a threshold number of unexcused absences. We also used internet searches regarding the compulsory education laws in the states. Results of this survey are described in the background section of this report.

A2 Analytical Approaches.

A2.1 Outcomes for youth who receive petitions.

We took a number of approaches to analyzing the effects of truancy petitions on outcomes for youth receiving petitions.

1) Using the entire cohort of high school students in 2002–03, and controlling for all known characteristics, we used regression analysis to estimate the effect of students receiving petitions on all outcomes.

2) Using the entire cohort of high school students in 2002–03, we used instrumental variables (estimating the likelihood that any student would receive a petition), controlling for district and known student characteristics, to estimate the effect of the truancy petition on all the outcomes of interest.

3) Using the entire cohort of high school students in 2002–03, we used fixed effects models that controlled for each student's school district and known student characteristics, to estimate the effect of the truancy petition on all the outcomes of interest.

4) We matched students with a petition to others who did not receive a petition. Students were matched on:

   - Race
   - Gender
   - Whether over-age for grade
   - Cumulative GPA
   - Expected graduation year
   - Grade in school
   - Days absent during 2002–03
   - Any criminal conviction before the 2002–03 school year
   - Any criminal conviction during the 2002–03 school year.

In none of these approaches was a positive outcome significantly associated with the petition. Although we control for all characteristics available in the data, it is clear there are other factors—not recorded in the OSPI data—considered by districts in their decisions to file truancy petitions on any particular student.

A2.1 Effect of filing rate and court intensity on student outcomes.

We tested whether several features of district and court activities were related to outcomes for youth receiving petitions. In our regression analyses, we tested the effect of district filing rate (petitions filed divided by students with 10 or more absences) and the average court intensity—average number of hearings plus arrests for truancy cases filed in 2002–03 in each court. We found no consistent effects of either district filing rate or court intensity.

A.3 Data Limitations

Certain limitations in the OSPI data contributed to our inability to speak with confidence about the effects of truancy petitions on academic outcomes and crime. In particular, the following information would have contributed to our creating a comparison group for petitioned students:

- Number of unexcused absences
- Disciplinary action taken by the schools
- Interventions used by schools to assist struggling students.

Further, the fact that student-level attendance data were effectively available only for the 2002–03 and 2003–04 school years meant we were unable to take a time-series approach to the analysis.

PREVIOUS REPORTS IN THE TRUANCY SERIES

Klima, T., Miller, M., and Nunlist, C. (2009). *Washington's truancy laws: school district implementation and costs*. Olympia: Washington State Institute for Public Policy Document No. 09-02-2201.

Klima, T., Miller, M., and Nunlist, C. (2009). *What works? Targeted truancy and dropout programs in middle and high school.* Olympia: Washington State Institute for Public Policy Document No. 09-06-2201.

Klima, T., Miller, M., and Nunlist, C. (2009). *Truancy and dropout programs: interventions by Washington's school districts and community collaborations*. Olympia: Washington State Institute for Public Policy Document No. 09-06-2202.

Miller, M., Klima, T. and Nunlist, C. (2009). *Washington's truancy laws in the juvenile courts: Wide variation in implementation and costs.* Olympia: Washington State Institute for Public Policy, Document No. 09-10-2201.

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Institute staff, Laura Harmon and Callie Sundarum, were instrumental in matching records and constructing the analytical data sets.

* Suggested citation: Marna Miller, Tali Klima, & Corey Nunlist (2010). *Washington's truancy laws: Does the petition process influence school and crime outcomes?* Olympia: Washington State Institute for Public Policy, Document No. 10-02-2201.

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