



SHEEO

STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

A DREAM DERAILED?

INVESTIGATING THE CAUSAL EFFECTS OF
STUDENT PROTECTION AUTHORIZATION
POLICIES ON STUDENT OUTCOMES AFTER
COLLEGE CLOSURES

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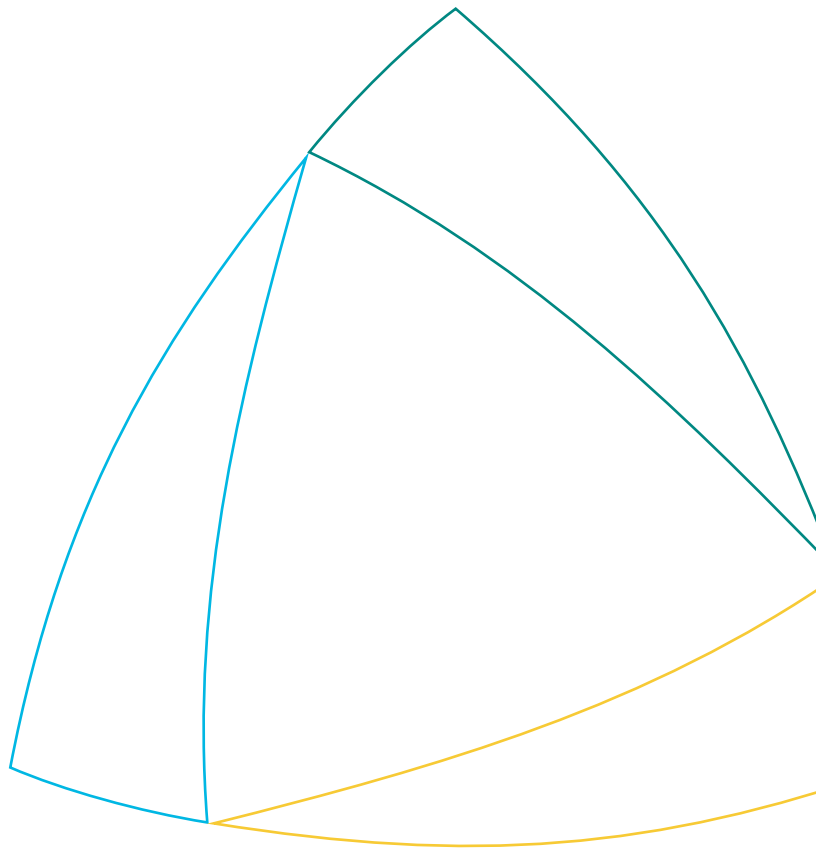


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The student-level panel dataset used in the report was constructed using the National Student Clearinghouse's data. Hee Sun Kim and Beatrix Randolph with the NSCRC have made substantial contributions by constructing the student-level dataset and conceptualizing and designing the key academic success and progress measures. Historic enrollment and completion records of students who experienced college closure were extracted from the Clearinghouse database to create a unique historical student-level panel dataset tracking students' academic success and progress over time. Key outcome measures related to college closure were developed based on NSCRC's knowledge and experience working with the most extensive and complete data warehouse of postsecondary enrollment and degree attainment in the United States and conducting analysis on college enrollment and migration patterns. For more information on Clearinghouse data, please visit nscresearchcenter.org/workingwithourdata.

An interactive and customizable visualization that summarizes outcomes for students who experienced closure and a closed institution data download capturing details to assist in determining abrupt and orderly closures are available on the project website (sheeo.org/project/college-closures).

The data in this report and accompanying website may be freely used with the appropriate attribution and citation:

Burns, R., Weeden, D., Bryer, E., Heckert, K., & Brown, L. (2023). *A dream derailed? Investigating the causal effects of student protection authorization policies on student outcomes after college closure*. State Higher Education Executive Officers Association. sheeo.org/wp-content/uploads/2023/08/SHEEO_CollegeClosures_Report3.pdf

The State Higher Education Executive Officers Association (SHEEO) serves the executives of statewide governing, policy, and coordinating boards of postsecondary education and their staffs. Founded in 1954, SHEEO promotes an environment that values higher education and its role in ensuring the equitable education of all Americans, regardless of race/ethnicity, gender, or socioeconomic factors. Together with its members, SHEEO aims to achieve this vision by equipping state higher education executive officers and their staffs with the tools to effectively advance the value of higher education, promoting public policies and academic practices that enable all Americans to achieve success in the 21st century, and serving as an advocate for state higher education leadership. For more information, visit sheeo.org.

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EXECUTIVE SUMMARY

A Dream Derailed? Investigating the Causal Effects of Student Protection Authorization Policies on Student Outcomes after College Closure is the third and final of three reports from a collaborative research team of SHEEO and the National Student Clearinghouse Research Center, seeking to quantify the impacts of college closures on students' subsequent postsecondary enrollment and completion outcomes and to identify the policy levers states may have to support students who experience a closure. The first report in this series provided a descriptive analysis of the students who experienced a closure and their longitudinal enrollment and credential attainment outcomes after closure. Using an original panel dataset constructed with student-level data from the Clearinghouse, the first report traced if, when, and through which education pathways affected students reenrolled to continue their education and whether they were successful in earning a credential. The second report built upon this foundation to provide causal estimates of the impacts of closures on student outcomes. It included a matched sample of students who did not experience a closure as a comparison group for determining the association between closure and student outcomes. This third and final report incorporates the state authorization policy context to ascertain if policy interventions can ameliorate the negative impacts of closures on students. It uses the treatment and control samples developed for the second report and adds a longitudinal dataset capturing state authorization policies related to student protections.

Additional data resources and visualizations are available on the project website (sheeo.org/project/college-closures), including an interactive data visualization summarizing student outcomes.

ENROLLMENT OUTCOME FINDINGS

The association between student protection authorization policies and enrollment after closure is mixed. Tuition recovery and surety bond policies tend to have no positive correlation with enrollment and are, in fact, associated with low reenrollment rates among students who experienced a closure (treatment students). Student records and teach-out plan policies have a strong positive correlation with reenrollment that lessens over time.

- Tuition recovery and surety bond policies have no positive correlation with reenrollment within four months after closure for treatment students. Students who experienced a closure in states with surety bond and/or tuition recovery policies were 80.9% and 72.4% less likely to be enrolled within four months than students in states with neither of these policies.
- Student records and teach-out plan policies have a significant positive correlation with reenrollment within four months for treatment students. Students who experienced a closure in states with student records and/or teach-out plan policies were 53.5% and 94.5% more likely to be enrolled within four months than students in states with neither of these policies.
- Tuition recovery and surety bond policies are also not positively correlated with reenrollment within one year for treatment students. Students are 74.4% and 64.8% less likely to have enrolled within one year if they experienced a closure in a state with one or both policies than students in a state with no policies.

- Student records and teach-out plans, similarly, have no significant positive correlation with reenrollment within one year for treatment students. Students are 26.1% less likely to be enrolled within one year if they experienced a closure in states with either policy than students in states with no policies.

These findings reinforce how disruptive institutional closures are for students and suggest that states should consider stronger consumer protection policies and procedures.

COMPLETION OUTCOME FINDINGS

Tuition recovery and surety bond policies have no consistent positive effects on credential completion, type of credential completed, or time to completion for students who experienced a closure. Student records and teach-out plan policies may have some positive effects on the type of credential completed and time to completion, but results are mixed.

- Tuition recovery and surety bond policies are not positively correlated with completion rates for treatment students. Students are 80.6% and 65.9% less likely to complete a post-closure credential if they experienced closure in a state with one or both policies than students in a state with neither of these policies.
- Similarly, student records and teach-out plans have no significant positive correlation with completion after closure. Students are 37.2% and 50.8% less likely to complete a credential if they experienced a closure in a state with one or both policies than students who experienced a closure in a state with no policies.
- The existence of both tuition recovery and surety bond policies in a state is correlated with a 339.5% increase in the completion of the same or higher credential that was pursued at closure compared to students who experienced a closure in a state with neither policy.
- Student records and teach-out plan policies, alternatively, are not associated with completing the same or higher credential. Students are 61.4% and 86.7% less likely to complete the same or higher credential if they experienced closure in a state with one or both policies than students in states with no policies.
- While tuition recovery and surety bond policies are not correlated with time to completion, the combination of both student records and teach-out plan policies is associated with shorter times to completion. Students who experienced a closure in states with both policies take 5.9 fewer months to complete than students in states with neither policy, while those in states with one of the two policies take 8.5 additional months.

These findings suggest that the student protection policies we analyzed are not currently designed to promote credential completion post-closure.

POLICY IMPLICATIONS

Charged with the consumer protection role within the program integrity triad, many states have enacted a mix of surety bonds, tuition recovery funds, student records retention, and teach-out policies that are intended to help students following an institutional closure. Our most encouraging results indicate that students are more likely to immediately reenroll in states that have record retention and teach-out policies in place. Both of these policies are designed to ease the transfer process for students after a closure, and our results suggest the presence of both policies is more effective than just one. Additionally, our analysis shows that states are more likely to adopt teach-out policies after experiencing institutional closures. In recent years, these policies have become more robust with states beginning to require closing institutions enter into teach-out agreements rather than develop teach-out plans that may not be implemented.

At first glance, our research results suggest that tuition recovery funds and surety bonds are not effective consumer protections based on the outcomes we explored. However, states have made policy design decisions that are likely impacting our results. First, states have designed tuition recovery funds and surety bonds to reimburse students who have been harmed by bad actors. The focus on reimbursing students is a critical consumer protection that is not directly measured in our study. Nevertheless, as currently designed, surety bond and tuition recovery fund policies do not allow students to receive a refund and utilize a teach-out option. This policy design requires students to make a difficult decision between reenrolling at a teach-out institution or receiving a refund. In this regard, the student protection policies counteract each other (e.g., students can only pursue tuition reimbursement if a teach-out opportunity is not pursued) and not only help explain our lack of positive findings but also lead to suggestions for policy improvements. Moreover, some states do not make students eligible for surety bond payouts. In these states, the surety bond is used to reimburse the state for costs incurred following a closure. These states treat surety bonds as consumer protection policies for taxpayers but not as a student protection policy.

With more college closures likely on the horizon, SHEEO recommends actions states can take to improve the primary consumer protection policies to better serve students following a closure:

- **Require teach-out agreements and student records retention policies.** Our results indicate that the presence of both policies has a positive effect on reenrollment and time to completion. States should consider requiring teach-out agreements as part of the initial authorization process. Agreements are binding contracts between institutions that provide for the transfer of earned credits from the closing institution to the teach-out institutions. As of 2021, only five states had policies that addressed teach-out agreements and student record retention.
- **Expand access to student protection funds and surety bond payouts.** There are two access expansions states should consider. First, states should consider removing the restriction that students cannot access surety bond or tuition recovery payouts if they accept the teach-out option. Rather than forcing students into making a difficult decision between reimbursement or a teach-out, these policies could be redesigned to provide incentives for reenrollment. For example, teach-out institutions may charge a higher tuition rate. Allowing students to utilize funds to reach tuition parity may help promote reenrollment and potentially completion. Second, several states reserve surety bond payouts for reimbursing the state for expenses incurred from institutional closures. These states should expand access to bond payouts to students.

- **Increase surety bond requirements and the size of tuition recovery funds.** If states follow the recommendation above to expand access to surety bond and tuition recovery fund payouts, the bond requirement and funds will need to grow. Currently, many states place a cap on the size of tuition recovery funds. Once funds reach the cap, institutions are no longer required to contribute to the fund. We recommend that states maintain funds that are large enough to support all students in the event that multiple institutions close in the same year.
- **Require institutions to maintain a surety bond or contribute to a student protection fund.** Even though our results did not find a positive association with student outcomes, student protection funds and surety bonds can be important student protection policies that provide refunds to students who have been harmed by a closing institution. As of 2021, 18 states did not require degree-granting institutions to maintain a surety bond to be authorized to operate. Additionally, only 16 states require degree-granting institutions to contribute to a student protection fund. Moreover, these consumer protection policies are not mutually exclusive, as 14 states have both policies in place. States adopting surety bond or student protection fund policies, should ensure that they are student centered.
- **Require institutions to follow a closure plan.** These plans should be outlined in administrative rules or statutes and define the actions institutions must follow and the information they must provide to the state. It will also be important for states to have an enforcement mechanism and appropriate penalties for owners and entities that do not follow the closure plan.
- **Reexamine state authorization exemptions.** Many states exempt certain institutions from the authorization and renewal process because they were operating before a specified date or have been operating within the state for many years without issue. With the current financial and demographic challenges facing the higher education sector broadly, states should consider annual financial monitoring and teach-out agreement reviews for all institutions so that states are better prepared in the event of a closure.

For additional data resources and to access the interactive data visualization, visit the project website (sheeo.org/project/college-closure).

STUDY BACKGROUND AND MOTIVATION

The number of postsecondary institutional closures steadily increased between 2004 and 2017, with a peak of 1,165 closed branch campuses in 2016.^{1,2} While the number of closures has declined in each subsequent year, experts predict that the financial and enrollment challenges wrought by the COVID-19 pandemic and broader demographic shifts may result in enrollment declines, financial challenges, and another steady increase in institutional consolidations or closures in the coming years.^{3,4} During the pandemic, the imminent closure of some struggling institutions was likely forestalled in part by the federal funding disbursed through the Higher Education Emergency Relief Fund (HEERF). These additional funds may have enabled institutions to continue to operate at a deficit without resorting to institutional closure. As institutions deplete this funding without the option for renewed financial relief, the dual pressures of increasing instructional and operational costs⁵ and enrollment declines⁶ may accelerate the pace of institution closures to pre-pandemic levels. Institutional closure may be an unavoidable outcome of the enrollment and financial challenges an institution confronts and may, in some instances, serve in the best interest of students who can transfer to a financially healthy institution that is not at risk of closure. Even if an institutional closure is orderly and planned, it will still be disruptive for the students, faculty, and staff of the closing institution. As the previous two reports in this series have shown, students who experience an institutional closure are less likely to reenroll or earn a credential at the same level. When they do earn a credential, it is more likely to be at a lower level than the credential type they were pursuing at the closed institution. When institutional closures occur, the regulatory triad (accreditors, state higher education agencies, and the federal Department of Education) is obligated to ensure that institutions have sufficient safeguards in place to protect students.

State higher education agencies in particular can enact policies and procedures that mandate certain student protections during state authorization or reauthorization. Authorization is the process by which postsecondary institutions apply through the state government for the authority to operate either a physical or online campus in the state. This process also enables institutions to receive funding through federal Title IV financial aid programs. Initial authorization typically lasts for one year, after which institutions must undergo an annual reauthorization process to remain authorized to operate.⁷ During the authorization or reauthorization process, states can require institutions to develop policies intended to protect students. Authorization policies related to closure can serve either to prevent closure or to mandate a variety of student protections when institutions close. The prevention of closure is not guaranteed, as even established, well-funded institutions may deem it necessary to close (e.g., Cazenovia College, which was established in 1894 and ceased operation at the end of the spring 2023 semester). This report thus focuses

1. Postsecondary Education Participants System. Federal Student Aid.
2. When collapsed from the campus to the institution level, the number of closures in 2016 totals 421.
3. Sanchez, O. (2023, January 13). With student pool shrinking, some predict a grim year of college closings. *The Hechinger Report*. hechingerreport.org/with-student-pool-shrinking-some-predict-a-grim-year-of-college-closings
4. Moody, J. (2023, January 19). A harbinger for 2023? Presentation college to close. *Inside Higher Ed*. insidehighered.com/news/2023/01/19/more-colleges-will-likely-face-closure-2023-experts-say
5. Commonfund Institute. (2022). *Commonfund higher education price index 2022 update*. commonfund.org/hubfs/04%20Institute/HEPI/Reports/Commonfund-Higher-Education-Price-Index.pdf
6. National Student Clearinghouse Research Center. (2023). *Current term enrollment estimates: Fall 2022 expanded edition*. nscresearchcenter.org/current-term-enrollment-estimates
7. Annual reauthorization is more common for non-degree granting and proprietary institutions. Institutions that have been in operation for longer periods of time may not be required to reauthorize each year.

instead on the post-closure student protection policies that aim to reduce the harms associated with closure: collection of tuition recovery funds, payment of surety bonds, preservation and dissemination of student records, and creation of teach-out plans.

TUITION RECOVERY FUNDS



Tuition recovery funds are collected from institutions by state agencies and are intended to reimburse students' tuition when institutions close.⁸ The institutional fees that comprise these funds can be flat rates or can be tied to a financial metric such as tuition revenues. Students who have been harmed by an institution—either through closure or another predatory act—can become eligible for compensation through these funds, which are administered by the state authorizing agency. An example of a comprehensive tuition recovery fund policy comes from the state of Arizona:⁹

- A. *The student tuition recovery fund is established and shall be administered by the [Arizona state] board [for private postsecondary education]. A person who is injured by a private postsecondary education institution ceasing operations may recover from the fund an amount that does not exceed the actual damages sustained.*
- B. *Each private postsecondary education institution that collects prepaid tuition shall annually pay an assessment to the board for each newly enrolled student in an amount equal to the sum of two-tenths of one percent of the total course cost for each newly enrolled student, not to exceed \$10 per student. A private postsecondary education institution is not required to pay more than \$25,000 per annual assessment period. A private postsecondary education institution is not required to pay assessments for newly enrolled students who are not residents of this state and for whom the institution has paid a student tuition recovery fund assessment or an assessment to a similar fund in the student's state of residence. A private postsecondary education institution is not required to pay assessments for students who are not residents of this state and who are enrolled in distance learning instruction.*

SURETY BONDS



Surety bonds are closely tied to tuition recovery funds. These bonds function as a financial insurance policy that allows institutions to operate in a state. Generally, surety bonds are purchased from a third-party guarantor that will disburse funds to students in the event of a loss, such as institutional closure. Surety bonds may also be paid to the authorizing agency to replace funds paid from a tuition recovery fund. An example of a comprehensive surety bond policy comes from the state of Alaska:¹⁰

- (a) *At the time application is made for authorization to operate, or for renewal of an authorization to operate the [Alaska] commission [on Postsecondary Education] may require the postsecondary educational institution to file a surety bond in the*

8. We use the term "tuition recovery fund" throughout this paper; however, these types of funds may have different names depending on the state. Some states refer to these funds as student protection funds.

9. 2017 Arizona Revised Statutes Title 32 - Professional and Occupations § 32-3072 Student tuition recovery fund (2017). law.justia.com/codes/arizona/2017/title-32/section-32-3072

10. 2016 Alaska Statutes Title 14 - Education, Libraries, and Museums Chapter 14.48 - Regulation of Postsecondary Educational Institutions §14.48.100 Bonds. (2016). law.justia.com/codes/alaska/2016/title-14/chapter-14.48/section-14.48.100

amount determined by the commission. The amount shall be determined by the number of students the institution seeks to enroll. The amount of the surety bond shall be reexamined by the commission upon each renewal of the authorization to operate to determine if a larger or smaller bond would be appropriate to ensure adequate protection for the students or enrollees, or their parents or guardians, or classes thereof. The bond shall be executed by the applicant as principal and by a surety company qualified and authorized to do business in this state and shall be conditioned to provide indemnification to any student or enrollee, or the student's or enrollee's parent or guardian, or class thereof, determined to have suffered loss or damage as a result of an act or practice which is a violation of this chapter by the postsecondary educational institution and that the bonding company shall pay a final nonappealable order of the commission or judgment of a court of this state having jurisdiction, upon receipt of written notification of the order or judgment. The aggregate liability of the surety for the bond of the institution or agent involved in the order or judgment may not, in any event, exceed the amount of the bond.

STUDENT RECORDS



Student records retention policies are standard state policies that can exist in the absence of an institutional closure policy. Generally speaking, these policies dictate the student information that institutions are required to retain (e.g., basic demographics, courses taken, credits completed) and provide to students if requested. More stringent policies include storage requirements that protect against damage or tampering and the conditions under which a state agency may seize student records or obtain a court order to do so. When these records retention requirements are incorporated as a part of an institutional closure policy, they specify how students can access their records, what agency is responsible for retaining the records, and what other parties may request copies of the records. An example of a student records policy within the context of institutional closure comes from the state of Florida:¹¹

- (3) *If the [Florida] commission [for Independent Education] finds that an institution has ceased operating without providing for the proper access to student records, the commission may require the institution to convey all student records to the commission office or to another location designated by the commission or its staff. The commission shall make copies of records available to bankruptcy trustees upon request and to the student or those designated by the student. Confidentiality of the records shall be maintained to the extent required by law. The commission may seek civil penalties not to exceed \$10,000 from any owner, director, or administrator of an institution who knowingly destroys, abandons, or fails to convey or provide for the safekeeping of institutional and student records. The commission may use moneys in the Student Protection Fund to facilitate the retrieval or safekeeping of records from an institution that has closed.*

11. 2022 Florida Statutes Title XLVIII 1005.36 Institutional closings (2022). leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=1000-1099/1005/Sections/1005.36.html

TEACH-OUT PLANS



Teach-out plan policies are an essential component of institutional closure policies and specify the conditions for ensuring the completion of students affected by closure. Not all closure policies incorporate a teach-out plan or specify the details a teach-out plan should include. The most basic policies require institutions to have an orderly plan for closure, including how to assist students through completion or transfer. More stringent policies may require institutions to enter into teach-out agreements with other institutions that agree to accept transfer students from the closed institution. While less common, these more stringent policies provide guaranteed transfer pathways for affected students. An example of a comprehensive teach-out plan policy comes from the state of Washington:¹²

- (2) *In the event an institution plans to discontinue all its operations in Washington, the chief administrative officer of the institution shall:*
 - (c) *Provide current students with alternative opportunities, acceptable to the council, to complete their studies; and*
 - (d) *Submit to the [Washington Student Achievement] council the following:*
 - (iv) *The alternative opportunities for program completion, acceptable to the council, that are provided by the institution for students currently enrolled in programs of study;*
 - (vii) *A copy of any signed transfer agreement;*
 - (viii) *A copy of any signed teach-out agreement;*

Collectively, these four policies can provide students with tuition refunds, completion or transfer opportunities, and access to transcripts, all of which can assist students in recovering from an institutional closure.

EXISTING RESEARCH

Prior research on college closures has focused primarily on determining predictive factors of institutional closure,¹³ analyzing the effects of federal sanctions on enrollment,¹⁴ and estimating the rate of uptake of closed school loan discharge.¹⁵ The first report in this series, *A Dream Derailed? Investigating the Impacts of College Closures on Student Outcomes* (referred to as *Impacts* throughout this paper),¹⁶ and the second report, *A Dream Derailed? Investigating the Causal Effects of College Closures on Student Outcomes* (referred to as *Causal Effects* throughout

12. Washington Administrative Code §250-61-160 Discontinuance or closure requirements (2020). apps.leg.wa.gov/wac/default.aspx?cite=250-61-160

13. Kelchen, R. (2020). *Examining the feasibility of empirically predicting college closures*. Working paper. brookings.edu/wp-content/uploads/2020/09/ES-Kelchen-09.08.20-1.pdf

14. Cellini, S., Darolia, R., & Turner, L. (2020). Where do students go when for-profit colleges lose federal aid? *American Economic Journal: Economic Policy* 12(2): 46-83.

15. Emry-Arras, M. (2021). *College closures: Many impacted borrowers struggled financially despite being eligible for loan discharges*. United States Government Accountability Office (GAO). [gao.gov/assets/gao-21-105373.pdf](https://www.gao.gov/assets/gao-21-105373.pdf)

16. Burns, R., Brown, L., Heckert, K., & Weeden, D., Kim, H., Randolph, B., Pevitz, A., Karamarkovich, S., & Causey, J., (2022). *A dream derailed? Investigating the impact of college closures on student outcomes*. State Higher Education Executive Officers Association & National Student Clearinghouse Research Center. sheeo.org/wp-content/uploads/2022/11/SHEEO_NSCRC_CollegeClosures_Report1.pdf

this paper),¹⁷ were the first to empirically investigate the longitudinal outcomes of a large sample of students who experienced college closures between 2004 and 2020. These studies found that less than half (47.1%) of students reenrolled in postsecondary education after experiencing a closure, and of those who did reenroll, only 36.8% earned a postsecondary credential. Moreover, students who experienced a closure were 50.1% less likely to earn a credential than students who did not experience a closure.

Most of our knowledge of state authorization is descriptive, historical, and targeted to practitioners. The National Council for State Authorization Reciprocity Agreements' (NC-SARA) State Authorization Guide provides the most comprehensive view of state authorization, including identification of authorizing agencies, institutions regulated, application processes, reciprocity agreements between states, policies related to consumer protection and student complaints, and mechanisms of enforcement.¹⁸ Recent research on state authorization policies has catalogued and categorized the policy landscape across states, providing a cross-sectional view of the process of authorization, the key actors involved, and the stringency of state approaches.¹⁹ Other researchers have built on this policy inventory to examine the authorization context associated with institutional closures, finding no consistent association between the stringency of authorization policies and the number of for-profit institutional closures.²⁰ The policy authorization process and the impacts of authorization are usually analyzed in the context of outcomes unrelated to closure, such as distance education authorization^{21,22} and regulation of for-profit institutions.²³

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17. Burns, R., Bryer, E., Heckert, K., Weeden, D., & Brown, L. (2023). *A dream derailed? Investigating the causal effects of college closures on student outcomes*. State Higher Education Executive Officers Association. sheeo.org/wp-content/uploads/2023/04/SHEEO_CollegeClosures_Report2.pdf
 18. nc-sara.org/guide/state-authorization-guide
 19. Ness, E., Baser, S., & Dean, M. (2021). *State authorization landscape and process: An inventory, classification, and analysis*. State Higher Education Executive Officers Association. sheeo.org/wp-content/uploads/2021/09/StateAuthorizationLandscape_NessBaser.pdf
 20. Dell, M., Lee, J., & Weeden, D. (2021). *Investigating factors associated with college openings and closures: The role of state authorization policies*. State Higher Education Executive Officers Association. sheeo.org/wp-content/uploads/2021/10/DellEtAl_OpeningsClosuresAndStateAuthorization.pdf
 21. Onwuameze, N. (2017). State authorization reciprocity agreement: participation and access to higher education. *Open Learning: The Journal of Open, Distance, and e-Learning*, 32(2): 137-146. doi.org/10.1080/02680513.2017.1311782
 22. Ozdemir, D., & McDaniel, J.D. (2013). Evaluation of the state authorization process for distance education. *Online Journal of Distance Learning Administration*, 15(1). ojdla.com/archive/spring161/mcdaniel_ozdemir.pdf
 23. Ward, J.D., & Tierney, W.G. (2017). Regulatory enforcement as policy: Exploring factors related to state lawsuits against for-profit colleges. *American Behavioral Scientist*, 61(14): 1799-1823. doi.org/10.1177/0002764217744819

RESEARCH QUESTIONS

This report expands on previous research and the first and second reports in this series (hereafter referred to as *Impacts* and *Causal Effects*, respectively) by providing causal estimates of the impacts of state authorization policies on student outcomes after closure. The research questions include:

RQ1. How does the persistence rate after four months and one year of students who experienced a closure differ by stringency of student protection authorization policies?

RQ2. How does the post-closure credential completion rate differ by stringency of student protection authorization policies?

RQ3. How does the type of credential earned compared to the type of credential pursued at time of closure differ by stringency of student protection authorization policies?

RQ4. How does the post-closure total time elapsed to completion differ by stringency of student protection authorization policies?

METHODOLOGICAL NOTES

This report uses the same sources from *Impacts* and *Causal Effects*: an original panel dataset constructed with student-level data from the Clearinghouse, federal data sources for institutional and student demographic information, and an original institutional data source containing contextual college closure information. The dataset for this report includes an additional proprietary longitudinal dataset tracking the existence and stringency of four state student protection authorization policies: tuition protection funds, surety bond requirements, teach-out policies, and records retention policies. The complete dataset includes enrollment and credential completion records for 143,215 treatment students who experienced a closure at 467 institutions of higher education between July 1, 2004, and June 30, 2020, and 1,295,773 matched control students enrolled in 467 matched institutions who did not experience a closure.

INSTITUTIONAL AND STUDENT DATA COLLECTION

Institutional data was sourced from the Integrated Postsecondary Education Data System (IPEDS), the College Scorecard, the Postsecondary Education Participants System (PEPS), and the Federal Student Aid (FSA) Data Center. After data cleaning and elimination of non-Clearinghouse reporting institutions, the final sample included 934 unique 8-digit OPEIDs at the campus level, including 467 institutions that closed between 2004 and 2020 and 467 matched institutions that did not close.

This study includes 143,215 treatment students who (1) had an eligible enrollment (full- or part-time enrollment of 21 days or longer) at one of the 467 closed degree-granting institutions within 120 days prior to the date of closure; or (2) had a valid enrollment for the term during which the closure occurred. Enrollment and credential records prior to, during, and after a closure experience were tracked to capture academic trajectories over a student's full postsecondary career. For students with multiple closure experiences, analyses are based on their first closure experience unless otherwise noted. An additional 1,517,775 students were identified as a control group of students who were enrolled in one of the 467 open institutions during the same time period that closure occurred in the matched closed institution and fit the same enrollment criteria described above for treatment students. This control sample was reduced to 1,295,773 students by the matching procedures described below.

For additional details on institutional and student data collection procedures, see *Impacts* and *Causal Effects* reports on SHEEO's project website at sheeo.org/project/college-closures.

STATE AUTHORIZATION LONGITUDINAL POLICY INVENTORY DATA COLLECTION

State authorization policies related to student protections during institutional closures were collected for the years 2004 to 2020 to overlap with the closure dates of institutions in the sample. A team of researchers from SHEEO and the University of Georgia collected longitudinal data for all 50 states and the District of Columbia using LexisNexis archives of state statutes and administrative codes. Data were collected separately for each authorizing body in the state, as most states maintain separate authorization processes for degree-granting and non-degree-granting institutions. The first round of data collection constituted the identification of existing

policies in state statute and administrative code related to the four consumer protection areas of interest: surety bonds, student records, tuition recovery funds, and teach-out plans. Researchers also noted years in which states implemented statutory or administrative changes to policies, including whether policies became more or less stringent in terms of student protections.

Following initial data collection, researchers coded the existence of statutes or administrative codes from binary indicators into multinomial indicators of stringency for each of the four policy areas of interest using contextual information from the language of statutes and codes. Data were recoded separately for degree-granting and non-degree-granting institutions. If a state has a consumer protection policy in place for non-degree-granting institutions but not a concomitant policy in place for degree-granting institutions, the state would be coded 0 for the degree-granting sector. In states with both statutes and administrative codes, only the more stringent policy was recoded. The levels of stringency for each policy area appear below, from least to most stringent.

TUITION RECOVERY FUNDS

- 0=No policy exists.
- 1=Policy exists.
- 2=Policy exists, and value of tuition recovery fund is tied to institutional finance (typically tuition revenues).

SURETY BONDS

- 0=No policy exists.
- 1=Policy exists.
- 2=Policy exists, and value of surety bond is tied to institutional finance (typically tuition revenues).

STUDENT RECORDS

- 0=No policy exists.
- 1=Policy exists.
- 2=Policy exists and is relevant to institutional closure.
- 3=Policy exists, is relevant to institutional closure, and provides additional specificity and guidelines related to authority, storage, and access.

TEACH-OUT PLANS

- 0=No policy exists.
- 1=Policy exists and requires institutions to submit a generic, non-specified plan to authorizing agency.
- 2=Policy exists and provides details regarding information to include in plan.
- 3=Policy exists, provides details regarding information to include in the plan, and mandates a teach-out agreement with other institutions.

Following longitudinal data collection, data were merged with the institution and student dataset to match with the state and year of closure for each of the 467 closed institutions and the matched artificial closure year of the 467 matched open institutions. Each student subsequently was assigned a level of policy stringency for tuition recovery funds, surety bonds, student records, and teach-out plans for the year of closure in their institution state. All institutions in the sample reported the awarding of degrees or credentials to students in the NSC database; therefore, only data for degree-granting institutions were retained.

REGRESSION ANALYSIS

Student outcomes for treatment and control groups are analyzed using logistic and linear regression models. All treatment students (n=143,215) and all matched control students (n=1,295,773) are included in the regression models, although some models are further subset to narrow the analysis to specific populations of interest. Weights from the matching process described in the *Causal Effects* report are used in all models to create a balanced comparison of the two student groups.

The five outcome variables of interest in this report include:

RQ1.1: Student was enrolled at any time between closure (or matched closure date) and four months after closure (or matched closure date).

RQ1.2: Student was enrolled at any time between closure (or matched closure date) and one year after closure (or matched closure date).

RQ2: Student completed a credential after closure (or matched closure date).

RQ3: Student completed the same or higher credential after closure (or matched closure date) that they were pursuing at the time of closure (or matched closure date).

RQ4: Total time for student to complete a credential after closure (or matched closure date), measured from first postsecondary enrollment.

Logistic regression models estimate the probability of a binary outcome (e.g., whether a student completed a credential) given a set of independent covariates. The logistic regression model is bounded by the values of the binary outcome (0 and 1) and assumes that the data follow a sigmoid, or s-shaped, function. The outcome of a logistic regression model is the log-odds of an event, which can be converted to a likelihood ratio that describes the likelihood of an event occurring conditional on receiving the treatment (i.e., institution closure). The generalized model of the logistic regression is the form:

$$p(x) = \frac{1}{1 + e^{-(\beta_0 + \beta_1 x)}}$$

Where β_0 is the y-intercept, and β_1 is the slope of the log-odds as a function of x (the covariate of interest).

Logistic regressions are used to model the following enrollment and completion outcomes:

RQ1: Enrolled in postsecondary education within four months and one year following closure (for treatment students) or the matched closure date (for control students).²⁴

RQ2: Earned a first postsecondary credential after closure (for treatment students) or the matched closure date (for control students).²⁵

RQ3: Earned a credential of the same or higher type after closure (for treatment students) or the matched closure date (for control students) that student was pursuing at time of closure or the matched closure date.²⁶

Ordinary least squares (OLS) regression models estimate the linear relationship between a continuous outcome (e.g., time to completion) and a set of independent covariates. The OLS regression model minimizes the sum of the squares of the differences between the values of the observed outcome variable and the estimated values of the linear function. The outcome of a linear regression is a beta coefficient that measures the value of a one-unit change in the independent variable (e.g., treatment) on the dependent (outcome) variable. The generalized model of the OLS regression is the form:

$$y = \alpha + \beta x$$

Where β is the slope and α is the y-intercept of the function, y is the value of the dependent variable, and x is the value of the covariate of interest.

Linear OLS regressions are used to model the following completion outcomes:

RQ4: Total time elapsed from first postsecondary enrollment to first postsecondary credential earned after closure (for treatment students) or the matched closure date (for control students).²⁷

In addition to the treatment variable, the other primary independent variables of interest include measures of state student protection authorization policies. When each policy was analyzed in isolation, results indicated the existence of interactive effects between policies. For example, the longitudinal policy dataset revealed that states generally adopt either a surety bond policy or a tuition recovery policy. These policies also tend to function in the same way: to provide students with some degree of financial recompense in the event of closure. The final analysis thus includes a variable that combines tuition recovery and surety bond policies into three categories:

24. Students who had earned a credential after closure but prior to the respective follow-up dates are excluded from these models.

25. Students who earned a credential prior to enrolling at the closed institution or the matched open institution are excluded.

26. These models are limited to students who earned a credential after closure or the matched closure date. Students with unknown credential types and non-credit credentials are excluded.

27. Students who earned a credential prior to enrolling at the closed institution or the matched open institution are excluded.

INTERACTION OF TUITION RECOVERY AND SURETY BONDS:

- 0=Neither a tuition recovery policy or surety bond policy.
- 1=Either a tuition recovery policy OR surety bond policy.
- 2=Both a tuition recovery AND surety bond policy.

The longitudinal policy dataset also revealed high rates of collinearity between student records and teach-out plan policies, as all teach-out plans included a section on the retention of student records. The combined student records and teach-out plans categories for analysis include:

INTERACTION OF STUDENT RECORDS AND TEACH-OUT PLANS:

- 0=No student records or teach-out plan policy.
- 1=Either a student records OR teach-out plan policy.
- 2=Both a student records AND teach-out plan policy.

State authorization policies related to closure and student protections in theory have little or no impact on control students who did not experience a closure. Control students are included in the models to compare the correlations between the existence of these policies and student outcomes for treatment and control students. Each of the combined policy variables described above was therefore interacted with the treatment variable. The result was two 6-category interaction variables, with treatment students in states with no policy as the reference category in both cases. These interaction variables allow for the isolation of the correlation between the policy and treatment students' outcomes, while controlling for the results of students who did not experience a closure.

For both logistic and OLS regression models, independent covariates include race/ethnicity, sex, age category, major field of study, prior enrollment status, degree program, enrollment intensity, institution sector, and institution state. Some of these variables were used in the construction of the student-level match described in the *Causal Effects* report and are included in the regression models to further control for differences by student and institutional characteristics.

The summary statistics of the covariates for treatment and control students appear in *Causal Effects*. Summary statistics of the number of closures per state and state student protection policies appear in the following *Institution Closures and State Student Protection Policies* section. Results of the regression models are found in the *Enrollment Outcomes* and *Completion Outcomes* sections below.

DATA LIMITATIONS

Although we created a comprehensive longitudinal dataset capturing student protection authorization policies across states and over time, we cannot guarantee that all institutions authorized to operate in a state maintained or upheld these policies. For instance, some institutions that have been authorized for many years may be "grandfathered in" when new policies are implemented and may not be required to submit new plans. Due to exemptions, we were not able to do an individual match that each policy adopted by a state applied to every institution that closed in that state.

We also cannot ensure the feasibility or viability of individual institutional policies or the extent to which they comply with state regulations, as we do not have access to institution applications for authorization. Because closures often occur with little forewarning or planning, we cannot measure whether or to what extent institutions complied with the requirements of each closure-related student protection policy during the closure process. Moreover, not all authorizing agencies have the capacity and resources to enforce these regulations, particularly when institutions close due to financial bankruptcy. Consequently, the correlation between the policy environment and student outcomes may be weakened by a lack of institutional compliance.

For additional data and methodological limitations, see the *Causal Effects* report.

INSTITUTION CLOSURES AND STATE STUDENT PROTECTION POLICIES

Across the broader postsecondary landscape beyond the institutions included in our analytical sample, the total number of closures between 2004 and 2020 ranged from seven in Alaska and Wyoming (0.4 per year) to 423 in California (24.9 per year) (*Appendix A*).²⁸ When standardized to account for full-time equivalent enrollment (FTE), Rhode Island had the fewest closures (average 0.7 per 1 million FTE), while Wyoming had the largest number of closures, with an average of 11.8 per 1 million FTE.

TABLE 1
STUDENT PROTECTION AUTHORIZATION POLICIES BY STATE, 2004-2020

	STATE COUNT	STATE PERCENTAGE
TUITION RECOVERY		
NO POLICY	674	79.3%
POLICY EXISTS	63	7.4%
POLICY TIED TO FINANCES	113	13.3%
SURETY BONDS		
NO POLICY	373	43.9%
POLICY EXISTS	222	26.1%
POLICY TIED TO FINANCES	255	30.0%
STUDENT RECORDS		
NO POLICY	160	18.8%
POLICY EXISTS	239	28.1%
POLICY TIED TO CLOSURE	387	45.5%
STRINGENT POLICY TIED TO CLOSURE	64	7.5%
TEACH-OUT PLANS		
NO POLICY	402	47.3%
POLICY EXISTS	149	17.5%
STRINGENT POLICY	273	32.1%
MOST STRINGENT POLICY	26	3.1%

NOTE:

1. Totals capture policies in each state-year to capture policy changes within states over time. The total count is therefore 850 states (50 states across 17 years of data analysis).

SOURCES: Postsecondary Education Participants System (PEPS) and SHEEO Longitudinal Policy Authorization Dataset

Among the four policies examined in this analysis, student records policies tied to closure were the most common form of student protection across all states that had any institutional closures between 2004 and 2020. During this time frame, the largest percentage of states had no tuition recovery policy (79.3%), no surety bond policy (43.9%), no teach-out plan policy (47.3%), or a student records policy tied to closure (45.5%) (*Table 1*).

28. These statistics are sourced from the PEPS database, a weekly extract of data from the U.S. Department of Education tracking Title IV eligibility and closure information.

Some states responded to large numbers of closures by implementing more stringent policies in the three years following the increase in closures. Closures in prior years had no effect on the implementation of more stringent tuition recovery, surety bond, or student records policies, but had significant positive effects on the enactment of more stringent teach-out policies in the following three years (*Table 1A*). Excluding year fixed effects, each additional closure increases the likelihood of moving from a less stringent to a more stringent teach-out policy by 5.7%. After controlling for year fixed effects, the likelihood of adopting a more stringent teach-out policy increases by 7.5% with each additional closure.

TABLE 1A
LIKELIHOOD RATIOS OF STRENGTHENING OF TEACH-OUT PLAN & STUDENT RECORDS POLICIES WITHIN THREE YEARS OF CLOSURE

	TEACH-OUT PLAN (WITHOUT YEAR)	TEACH-OUT PLAN (WITH YEAR)	STUDENT RECORDS (WITHOUT YEAR)	STUDENT RECORDS (WITH YEAR)
NUMBER OF CLOSURES	5.7%*	7.5%**	2.1%	3.7%

NOTES:

1. States with the most stringent policies are excluded.
2. Additional covariates and regression models appear in *Appendix C, Table C1*.
3. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset.

When narrowing the sample to the 934 institutions included in our analysis, the largest number of states with closures had no tuition recovery policy (70.2%), no surety bond policy (43.9%), no teach-out plan policy (42.1%), or a student records policy tied to closure (47.4%) (*Table 2*). Control institution states primarily followed the same pattern, although states were equally likely to have no teach-out plan policy or a stringent teach-out plan policy (38.1%). Among closure states, between 15.6% (seven states) and 26.7% (12 states) experienced a change in their student protection policies between 2004 and 2020 (*Table 2A*). Between 14.0% (seven states) and 24.0% (12 states) of control states experienced a policy change during the same time.

TABLE 2
STATE STUDENT PROTECTION POLICIES BY CLOSURE (N=45) AND CONTROL (N=50) STATES
AT TIME OF CLOSURE (UNWEIGHTED)

	CLOSURE STATE COUNT	CLOSURE STATE PERCENTAGE	CONTROL STATE COUNT	CONTROL STATE PERCENTAGE
TUITION RECOVERY				
NO POLICY	40	70.2%	46	73.0%
POLICY EXISTS	5	8.8%	6	9.5%
POLICY TIED TO FINANCES	12	21.1%	11	17.5%
SURETY BONDS				
NO POLICY	25	43.9%	24	38.1%
POLICY EXISTS	17	29.8%	20	31.7%
POLICY TIED TO FINANCES	15	26.3%	19	30.2%
STUDENT RECORDS				
NO POLICY	8	14.0%	8	12.7%
POLICY EXISTS	19	33.3%	20	31.7%
POLICY TIED TO CLOSURE	27	47.4%	31	49.2%
STRINGENT POLICY TIED TO CLOSURE	3	5.3%	4	6.3%
TEACH-OUT PLANS				
NO POLICY	24	42.1%	24	38.1%
POLICY EXISTS	11	19.3%	12	19.0%
STRINGENT POLICY	19	33.3%	24	38.1%
MOST STRINGENT POLICY	3	5.3%	3	4.8%

NOTES:

1. Statistics are unweighted.
2. Policy stringency is measured in the year of closure.
3. Totals sum to more than the respective number of treatment and control states due to state policy changes over time.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

TABLE 2A
CLOSURE (N=45) AND CONTROL (N=50) STATES THAT EXPERIENCED A POLICY
CHANGE (UNWEIGHTED)

	CLOSURE STATE COUNT	CLOSURE STATE PERCENTAGE	CONTROL STATE COUNT	CONTROL STATE PERCENTAGE
TUITION RECOVERY	7	15.6%	7	14.0%
SURETY BONDS	8	17.8%	10	20.0%
STUDENT RECORDS	11	24.4%	12	24.0%
TEACH-OUT PLANS	12	26.7%	12	24.0%

NOTE:

1. Statistics are unweighted.

SOURCES: Postsecondary Education Participants System (PEPS) and SHEEO Longitudinal Policy Authorization Dataset

Students who experienced a closure were most likely to be enrolled in a state with a non-stringent tuition recovery policy (38.5%), no surety bond policy (70.1%), a student records policy tied to closure (78.5%), and a non-stringent teach-out plan policy (43.4%) (Table 3). In contrast, students who did not experience a closure were most likely to attend an institution in a state with no tuition recovery policy (48.2%), no surety bond policy (69.8%), a student records policy tied to closure (59.8%), and a stringent teach-out plan policy with some details (51.1%).

TABLE 3
STATE STUDENT PROTECTION POLICIES BY TREATMENT (N=143,215) AND CONTROL (N=1,295,773) STUDENTS (UNWEIGHTED)

	TREATMENT STUDENT COUNT	TREATMENT PERCENTAGE	CONTROL STUDENT COUNT	CONTROL PERCENTAGE
TUITION RECOVERY				
NO POLICY	45,893	32.0%	624,615	48.2%
POLICY EXISTS	55,103	38.5%	77,677	6.0%
POLICY TIED TO FINANCES	42,219	29.5%	593,481	45.8%
SURETY BONDS				
NO POLICY	100,363	70.1%	904,008	69.8%
POLICY EXISTS	25,217	17.6%	241,386	18.6%
POLICY TIED TO FINANCES	17,635	12.3%	150,379	11.6%
STUDENT RECORDS				
NO POLICY	3,846	2.7%	57,226	4.4%
POLICY EXISTS	21,983	15.3%	435,380	33.6%
POLICY TIED TO CLOSURE	112,360	78.5%	774,380	59.8%
STRINGENT POLICY TIED TO CLOSURE	5,026	3.5%	28,787	2.2%
TEACH-OUT PLANS				
NO POLICY	22,066	15.4%	475,587	36.7%
POLICY EXISTS	62,203	43.4%	147,146	11.4%
STRINGENT POLICY	57,119	39.9%	661,796	51.1%
MOST STRINGENT POLICY	1,827	1.3%	11,244	0.9%

NOTE:

1. Statistics are unweighted.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

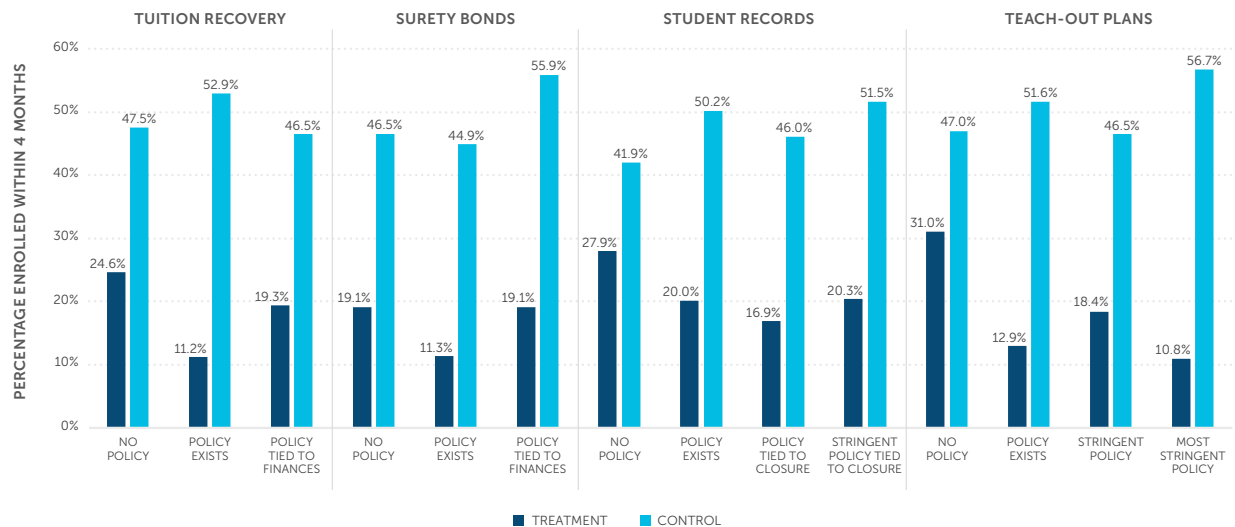
ENROLLMENT OUTCOMES

Enrollment results are reported for two separate follow-up dates: four months and one year after closure (or the matched closure date, for control students). Students who earned a credential after closure but before each follow-up date are excluded from the analyses. Results are presented for enrollment outcomes at any time between closure and four months and between four months and one year after closure.²⁹

RESULTS FOR RQ1. PERSISTENCE RATES

Treatment students have higher rates of enrollment within four months after closure if they experienced closure in a state with no student protection policies (*Figure 1*). Consistent with the findings in *Causal Effects*, control students have higher enrollment rates than treatment students within four months after closure (or the matched closure date).

FIGURE 1
PERCENTAGE TREATMENT AND CONTROL STUDENTS ENROLLED WITHIN FOUR MONTHS BY STATE STUDENT PROTECTION POLICIES



NOTE:

1. Statistics are unweighted.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

The descriptive findings for tuition recovery and surety bond policies in *Figure 1* are confirmed by the results of logistic regression models for enrollment within four months post-closure. Compared to treatment students in states with no tuition recovery or tuition bond policy, students who experienced closure in states with tuition recovery and/or surety bond policies were 80.9% (if the state had one of the two policies) and 72.4% (if the state had both policies) less likely to have enrolled within four months after closure (*Table 4*). The same pattern holds for control students

29. Students who were enrolled at any time between closure and four months after closure or between four months and one year after closure are considered enrolled. Students did not need to be enrolled exactly four months or one year after closure. This allows for the inclusion of students who may not be enrolled due to a routine/scheduled academic break (e.g., summer/winter holidays).

who did not experience a closure. While control students in states with no tuition recovery or surety bond policy are 37.4% more likely than treatment students to have enrolled within four months, control students in states with one or both policies are 63.2% and 49.2% less likely, respectively, to have enrolled.

In contrast, the results of the regression model for enrollment within four months do not confirm the descriptive findings for student records and teach-out plan policies in *Figure 1*. Compared to treatment students in states with no student records or teach-out plan policy, students who experienced closure in states with one or both policies were 53.5% and 94.5% more likely to have been enrolled within four months after closure, respectively. The results are mirrored for control students, who are 142.8% and 238.0% more likely to have been enrolled within four months than treatment students in states with no policies.

TABLE 4
LIKELIHOOD RATIOS FOR ENROLLMENT WITHIN FOUR MONTHS

	TUITION RECOVERY & SURETY BOND	STUDENT RECORDS & TEACH-OUT PLAN
TREATMENT, ONE POLICY	-80.9%***	53.5%***
TREATMENT, BOTH POLICIES	-72.4%***	94.5%***
CONTROL, NO POLICY	37.4%***	90.8%***
CONTROL, ONE POLICY	-63.2%***	142.8%***
CONTROL, BOTH POLICIES	-49.2%***	238.0%***

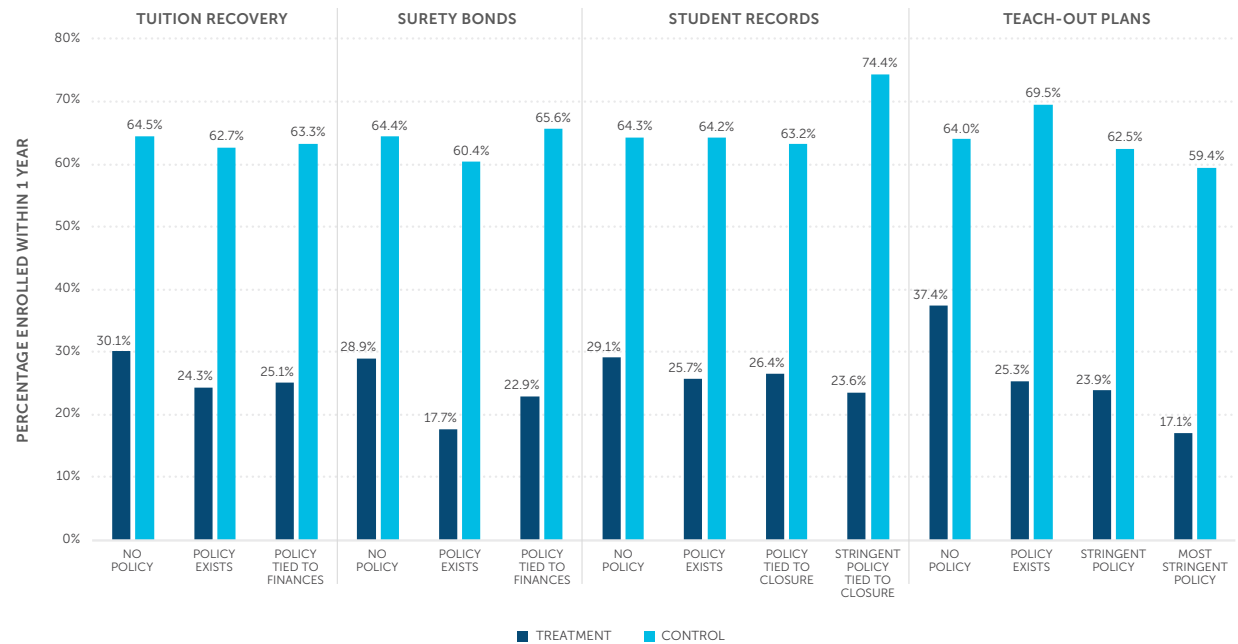
NOTES:

1. Reference category is TREATMENT, NO POLICY.
2. Students who completed a credential prior to four months post-closure are excluded.
3. Negative likelihood ratios indicate a lower likelihood; positive likelihood ratios indicate a greater likelihood.
4. Covariates included in this regression model appear in *Appendix C, Table C2*.
5. * p<0.05; ** p<0.01; ***p<0.001.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

Treatment students have higher rates of enrollment within one year after closure if they experienced a closure in a state with no student protection policies (*Figure 2*). Control students have much higher rates of enrollment than treatment students within one year after closure (or the matched closure date).

FIGURE 2
PERCENTAGE TREATMENT AND CONTROL STUDENTS ENROLLED WITHIN ONE YEAR
BY STATE STUDENT PROTECTION POLICIES



NOTE:

1. Statistics are unweighted.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

The descriptive findings for tuition recovery, surety bond, student records, and teach-out plan policies in *Figure 2* are confirmed by the results of logistic regression models for enrollment within one year post-closure. Compared to treatment students in states with no tuition recovery or tuition bond policy, students who experienced a closure in states with tuition recovery and/or surety bond policies were 74.4% (if the state had one of the two policies) and 64.8% (if the state had both policies) less likely to have enrolled within one year after closure (*Table 5*). These patterns are the same for control students. Control students in states with no tuition recovery or surety bond policy are 98.2% more likely than treatment students in states with no policies to have enrolled within one year. However, control students are 42.3% and 31.3% less likely to have been enrolled within one year than treatment students if they attended an institution in a state with one or both policies, respectively.

Compared to treatment students in states with no student records or teach-out plan policy, students who experienced a closure in a state with one of the two policies were 26.1% less likely to have been enrolled one year after closure. Control students were more likely than treatment students to have been enrolled within one year, regardless of the presence of student records and teach-out plan policies.

TABLE 5
LIKELIHOOD RATIOS FOR ENROLLMENT WITHIN ONE YEAR

	TUITION RECOVERY & SURETY BOND	STUDENT RECORDS & TEACH-OUT PLAN
TREATMENT, ONE POLICY	-74.4%***	-26.1%***
TREATMENT, BOTH POLICIES	-64.8%***	-5.4%
CONTROL, NO POLICY	98.2%***	105.0%***
CONTROL, ONE POLICY	-42.3%***	69.2%***
CONTROL, BOTH POLICIES	-31.3%***	96.6%***

NOTES:

1. Reference category is TREATMENT, NO POLICY.
2. Students who completed a credential prior to one year post-closure are excluded.
3. Negative likelihood ratios indicate a lower likelihood; positive likelihood ratios indicate a greater likelihood.
4. Covariates included in this regression model appear in *Appendix C, Table C3*.
5. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

COMPLETION OUTCOMES

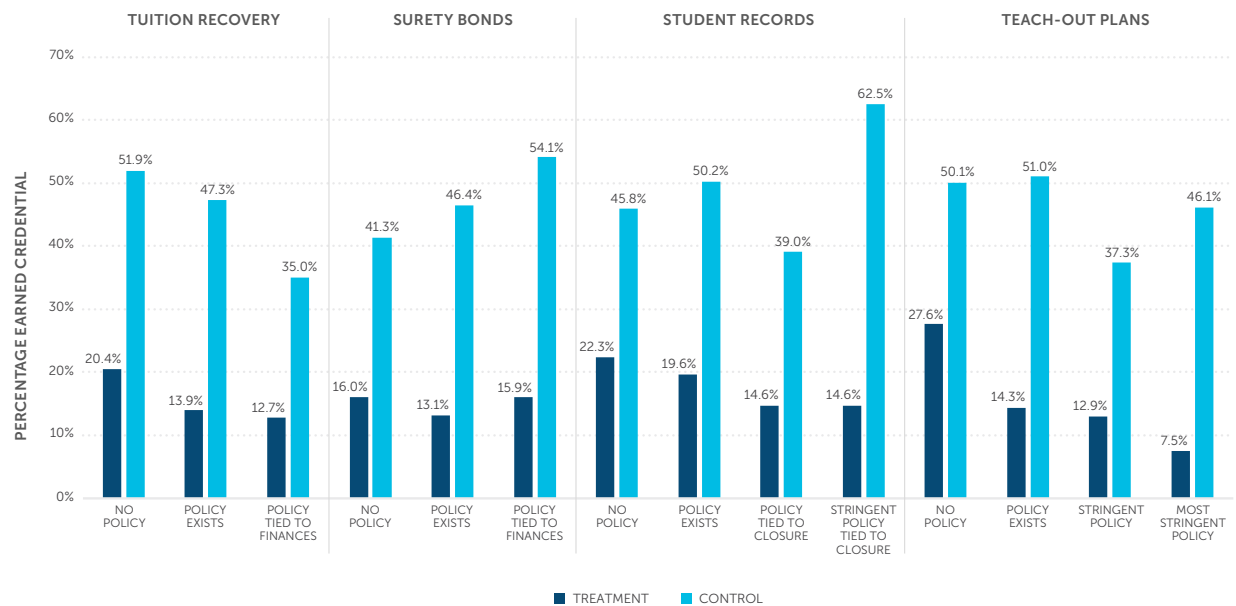
Completion results are reported for three distinct outcomes: whether a student completed a credential after closure (or the matched closure date), whether a student completed the same or higher credential that they were pursuing at the time of closure (among students who completed their first credential after closure), and total time to credential from first postsecondary enrollment to first credential after closure (among all students who completed their first credential after closure).

RESULTS FOR RQ2. CREDENTIAL COMPLETION RATES

Treatment students who experienced a closure in a state with no student protection policies have higher post-closure credential completion rates than treatment students in states with more stringent policies (*Figure 3*). Completion rates decrease steadily as protection policies become more stringent. Control students have higher credential completion rates than treatment students, regardless of the existence of student protection policies.

FIGURE 3

CREDENTIAL COMPLETION RATES FOR TREATMENT AND CONTROL STUDENTS BY STUDENT PROTECTION POLICIES



NOTE:

1. Statistics are unweighted.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

The results of the credential completion logistic regression confirm the descriptive findings reported in *Figure 3*. Compared to students who experienced a closure in a state with no tuition recovery or surety bond policy, students in states with one or both policies are 80.6% and 65.9% less likely, respectively, to complete a credential after closure (*Table 6*). These results are also true for control students: control students in states with no policy are 87.0% more likely to complete than treatment students, but control students in states with one or both policies are 53.4% and 40.9% less likely, respectively, to complete a credential than treatment students in states with no policy.

Students who experienced a closure in a state with either a student records or a teach-out plan policy were 37.2% less likely to complete a post-closure credential than treatment students in states with no policy, while students in states with both policies were 50.8% less likely. In contrast, control students were more likely than treatment students to complete a credential regardless of the existence of a student records and/or teach-out plan policy.

TABLE 6
LIKELIHOOD RATIOS FOR POST-CLOSURE CREDENTIAL COMPLETION

	TUITION RECOVERY & SURETY BOND	STUDENT RECORDS & TEACH-OUT PLAN
TREATMENT, ONE POLICY	-80.6%***	-37.2%***
TREATMENT, BOTH POLICIES	-65.9%***	-50.8%***
CONTROL, NO POLICY	87.0%***	78.8%***
CONTROL, ONE POLICY	-53.4%***	32.4%***
CONTROL, BOTH POLICIES	-40.9%***	8.9%

NOTES:

1. Reference category is TREATMENT, NO POLICY.
2. Students who completed a credential prior to enrolling in the closed institution or matched open institution are excluded.
3. Negative likelihood ratios indicate a lower likelihood; positive likelihood ratios indicate a greater likelihood.
4. Covariates included in this regression model appear in *Appendix C, Table C4*.
5. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

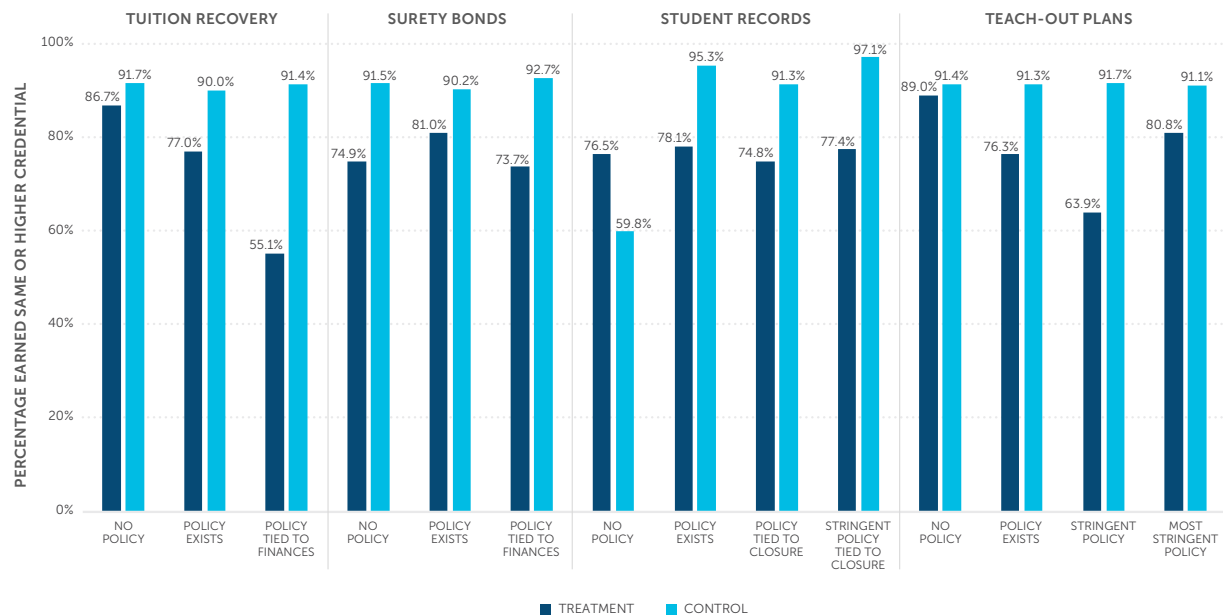
SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

RESULTS FOR RQ3. COMPLETED CREDENTIAL TYPE

Completion of the same or higher credential being pursued at time of closure follows no discernible pattern by student protection policies for treatment students (*Figure 4*). The majority of both treatment and control students complete the same or higher credential, although control students have higher rates of completion of the same or higher credential.

FIGURE 4

PERCENTAGE TREATMENT AND CONTROL STUDENTS EARNED SAME OR HIGHER CREDENTIAL BY STATE STUDENT PROTECTION POLICIES



NOTE:

1. Statistics are unweighted.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

Consistent with the descriptive findings in *Figure 4*, the results of the logistic regression for completion of the same or higher credential also show no discernible pattern between the stringency of tuition recovery/surety bond policies and the likelihood that students completed the same or higher credential after closure. Compared to treatment students in states with no policy, students who experienced a closure in a state with both policies were 339.5% more likely to complete the same or higher credential after closure (*Table 7*). In contrast, control students in states with no policy were 38.3% less likely to complete the same or higher credential, while control students in states with both policies were 232.7% more likely.

The correlation between completion of the same or higher credential and the existence of student records/teach-out plan policies is much more consistent: both treatment and control students in states with one or both policies are between 61.4% and 86.7% less likely than treatment students in a state with no policy to complete the same or higher credential.

TABLE 7
LIKELIHOOD RATIOS FOR POST-CLOSURE COMPLETION OF SAME OR HIGHER CREDENTIAL

	TUITION RECOVERY & SURETY BOND	STUDENT RECORDS & TEACH-OUT PLAN
TREATMENT, ONE POLICY	-49.6%	-61.4%***
TREATMENT, BOTH POLICIES	339.5%***	-86.7%***
CONTROL, NO POLICY	-38.3%***	-10.8%
CONTROL, ONE POLICY	42.8%	-74.6%***
CONTROL, BOTH POLICIES	232.7%**	-72.2%***

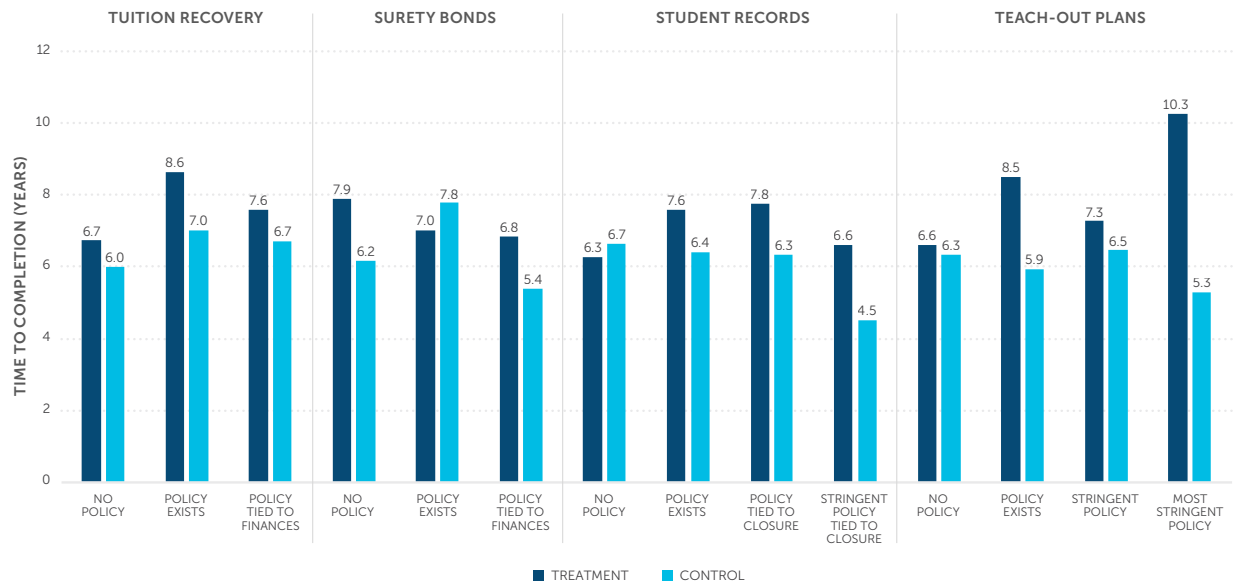
NOTES:

1. Reference category is TREATMENT, NO POLICY.
2. Students with missing or non-credit credential types are excluded.
3. Negative likelihood ratios indicate a lower likelihood; positive likelihood ratios indicate a greater likelihood.
4. Covariates included in this regression model appear in *Appendix C, Table C5*.
5. * p<0.05; ** p<0.01; ***p<0.001.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

RESULTS FOR RQ4. TIME TO CREDENTIAL COMPLETION

The total time to credential from first postsecondary enrollment does not vary by student protection policies (*Figure 5*).³⁰ Treatment students generally take longer from first postsecondary enrollment to completion of their first post-closure credential than control students.

FIGURE 5
TOTAL TIME TO CREDENTIAL FROM FIRST POSTSECONDARY ENROLLMENT FOR TREATMENT AND CONTROL STUDENTS BY STUDENT PROTECTION POLICIES

NOTE:

1. Statistics are unweighted.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

30. Excludes students who earned a credential prior to closure.

Consistent with the descriptive findings in *Figure 5*, the results of the time to completion regression show no significant differences in time to completion for treatment or control students by stringency of tuition recovery or surety bond policies (*Table 8*). Some differences exist for student records and teach-out plan policies, but results do not follow a consistent pattern. Compared to treatment students in states with no student records or teach-out plan policies, students who experienced a closure in a state with one policy took 8.5 additional months to complete, while students in states with both policies took 5.9 fewer months.

TABLE 8
ADDITIONAL MONTHS TO CREDENTIAL COMPLETION AFTER CLOSURE

	TUITION RECOVERY & SURETY BOND	STUDENT RECORDS & TEACH-OUT PLAN
TREATMENT, ONE POLICY	1.2	8.5**
TREATMENT, BOTH POLICIES	1.8	-5.9*
CONTROL, NO POLICY	-0.5	7.9***
CONTROL, ONE POLICY	0.0	4.1
CONTROL, BOTH POLICIES	4.9	-7.8**

NOTES:

1. Reference category is TREATMENT, NO POLICY.
2. Students who completed a credential prior to enrolling in the closed institution or matched open institution are excluded.
3. Negative coefficients indicate a shorter time to completion; positive coefficients indicate a longer time to completion.
4. Covariates included in this regression model appear in *Appendix C, Table C6*.
5. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

SOURCES: National Student Clearinghouse (NSC) and SHEEO Longitudinal Policy Authorization Dataset

DISCUSSION AND IMPLICATIONS

Our analysis builds on the prior reports in this series, which demonstrated that the relationship between college closures and student outcomes is overwhelmingly negative. In particular, reenrollment and credential completion outcomes for students of color post-closure lag behind their white peers. Charged with the consumer protection role within the regulatory triad, states have enacted policies that are designed to help protect students from the harmful effects of institutional closures. Surety bonds, tuition recovery funds, student records retention, and teach-out plan policies have been adopted by states to provide student protections following a closure. Our research provides initial evidence on the effectiveness of these four consumer protection policies to improve student outcomes following a closure. As the results described above indicate, the effect of these policies is at best mixed. In this section, we explore potential explanations for these results and provide recommendations for states that may help make these consumer protection policies more effective in improving student outcomes.

The findings for records retention and teach-out policies were the most encouraging, especially for short-term outcomes. Our results showing that students were 53.5% (one policy) and 94.5% (both policies) more likely to reenroll within four months provide evidence that these policies are effective consumer protections. It is worth noting that the increased likelihood ratio for students in states with both policies in place suggests that there is a benefit to adopting and enforcing both policies that cannot be duplicated with just one policy in effect.

Our findings also suggest that states are more likely to adopt teach-out policies after experiencing institutional closures. Not only have more states adopted teach-out policies, but these policies have also become more robust with the statutory or regulatory language providing greater detail about the process states expect institutions to follow when closing. For example, more states have begun requiring teach-out agreements rather than teach-out plans. Agreements are binding contracts between institutions that provide for the transfer of earned credits from the closing institution to the teach-out institutions. Teach-out plans are not as formalized, and the plans may not materialize in the absence of an agreement. Several states have adopted more robust policies in the latter years of our sample; consequently, these policies may help produce better student outcomes in the coming years as they are fully implemented.

The results associated with records retention and teach-out policies were less encouraging for enrollment within one year after a closure. The finding that students experiencing a closure in a state with either a records retention or teach-out policy were 26.1% less likely to have been enrolled one year after a closure and the statistically insignificant finding associated with the presence of both policies suggests limited long-term effectiveness of these policies. Our analysis did not distinguish between which states require teach-out agreements versus those that simply require a teach-out plan. It is possible that as more states adopt the more rigorous teach-out agreement policies, more students will be reenrolled within one year of a closure. Under teach-out plans, all programs offered by the closing institutions may not be covered by the teach-out plan or be offered at the teach-out institution. Only having teach-out plans as opposed to teach-out agreements is more common among institutions closing precipitously. In the absence of a formal teach-out agreement, some students may find that not all of their credits will transfer to the teach-out institution, which could cause students to not reenroll or stop out after a term at the teach-out institution. It is also possible that other factors, like affordability, are influencing student decisions. Teach-out agreements are designed to offer students similar academic pathways but do not address differences in tuition rates or the cost of attendance at the teach-out institution. If a teach-out institution does not have tuition parity, students may deem the new program unaffordable.

The lack of positive results for tuition recovery fund and surety bond policies suggest that there is room for states to improve these policies. As of 2021, 16 states had adopted a tuition recovery fund and 32 states had adopted a surety bond policy for degree-granting institutions. Before discussing the design of these policy, it is important to acknowledge that they serve an important role in reimbursing students who have been harmed or defrauded by bad actors. Our study focused on reenrollment and completion outcomes, which do not capture the full range of benefits provided by surety bonds and tuition recovery funds.

The design of surety bond and tuition recovery fund policies varies by state, but there are common design components that may help explain why these two policies were not associated with helping students reenroll following a closure. First, states only make tuition recovery fund and surety bond proceeds available to students if they do not use the available teach-out option. This means that if students enroll at a teach-out institution, they will not be eligible to receive any reimbursement from the tuition recovery fund or surety bond payout. This policy decision can have differential effects on students based on how far along they are in a program. Students that have only completed a couple of terms may opt for the refund option. Whereas students that are only a few terms away from completion have more sunk costs and may select the teach-out option. This policy decision of requiring students to choose between immediate reenrollment at a teach-out institution or a refund from a tuition protection fund or surety bond forces students to make a difficult decision at a time when their trust in higher education institutions is likely near a low point. In addition to the burden this choice places on students, it likely also places an additional burden on institutional faculty and staff and state agency staff helping students navigate their options following a closure.

Second, some states have very low surety bond requirements (e.g., \$20,000) that are not large enough to reimburse students in any meaningful way. In these states, the surety bonds are primarily (or solely) used to reimburse the state for costs associated with the closure. For example, states will incur costs with maintaining and storing student records and will use the surety bond payout to cover these costs. Students are often not even eligible to receive payouts from the surety bonds maintained by institutions in these states. Other states have a surety bond policy in place, but only require institutions to obtain a surety bond if certain conditions are met. For example, states may only require a surety bond if an institution does not meet financial viability thresholds. These policy decisions may help make surety requirements more affordable to institutions; however, they limit the utility of surety requirements as a student protection policy.

Third, some states limit student eligibility for accessing tuition recovery funds to tuition and fees for which a student prepaid but did not receive instruction for the full amount of the payment. This situation is most common for students that experience a precipitous closure with an institution shutting down with little or no warning during the middle of a term. In these states, students who experience an orderly closure and receive instruction for reimbursement of the full amount of tuition and fees paid will not be able to benefit from the tuition recovery fund.

The effect of these policy choices may help explain why students were 80.9% (one policy) and 72.4% (both policies) less likely to reenroll within four months of experiencing a closure. **As currently constructed, tuition recovery fund and surety bond policies may provide an incentive for students to not reenroll.** Not allowing students to utilize the teach-out option and receive tuition recovery fund or surety bond payouts may encourage some students to forego immediate reenrollment. Based on our prior research, this decision may also affect completion outcomes, as students who reenroll within four months are more likely to earn a credential. Additionally, by not making students beneficiaries of surety bonds, some states do not treat surety bonds as a

student protection policy. Given that state agencies are not likely to receive public funding to cover the costs of an institutional closure, it is logical and financially responsible to ensure the state receives funding to cover these closure costs through surety bonds. However, not making students eligible beneficiaries seems like a missed opportunity to provide financial relief to students who have been harmed by an institutional closure. Given the theory of action behind tuition recovery funds and surety bonds and that nearly two-thirds of states already operate one or both policies for degree-granting students, we believe that states should reform these policies to be more student-focused and offer recommendations for states in the policy implications section below.

The impact of federal policy should also be considered when discussing our reenrollment results. The borrower defense regulations first adopted in 2016 provided an option for students to have their federal loans discharged if they attended an institution that closed. Under the 2016 rules, students had to choose between accepting a teach-out option and having their loans discharged. If students did not reenroll or transfer their credits within three years, their loans were automatically forgiven. Modified rules were adopted in 2020 to encourage students to utilize teach-out options. Under the new rules, if students had a teach-out option available, they would not be able to discharge their loans. Given that 2020 rules went into effect late in our sample, the 2016 version of the borrower defense regulations would be more likely to influence student decisions. Much like many of the state tuition recovery fund and surety bond policies, the 2016 regulations required students to make a challenging decision between reenrolling in the teach-out option or choosing not to immediately reenroll. Unfortunately, we are not able to account for the role this federal policy may have had on our results.

The lack of a positive correlation between completion outcomes and the consumer protection policies is less surprising than some of the negative reenrollment results because tuition recovery funds, surety bonds, records retention, and teach-out plans are intended to help students reenroll and are not necessarily completion policies. As noted above, surety bond and tuition recovery fund policies are designed to reimburse students for harm caused by closing institutions and are not designed to help students reenroll let alone advance toward the completion of a credential. Similarly, records retention policies help ensure students have access to transcripts and other records that will help aid the transfer process to another institution. Once students have transferred and their previously earned credits have been accepted, records retention policies do little to promote completion. Teach-out policies are a little different, in that if the teach-out institutions are truly equivalent to the closing institution, we would expect to see transferring students complete at similar rates as students who began their education at the teach-out institution. We do not get to this level of granularity with our analysis, but the results showing students are less likely to complete a credential at the same level or higher suggest that teach-out agreements could be improved.

Our results showing that students were 61.4% less likely to earn the same credential or higher if a records retention or teach-out policy was in place and 86.7% less likely to do so if both policies were in place suggests that these policies, which in theory should help students stay on the same path at a teach-out institution as they were on at their closing institution, are not effective at doing so. The results for the presence of both policies are particularly surprising. Teach-out agreements are designed to transfer credit earned toward a credential to the teach-out institution and develop a pathway for students to complete the same credential. It is possible that other institutional factors are influencing student decisions. For instance, the lack of tuition parity, a change in modality, lack of geographic proximity, or the timing of when courses are offered may cause students to identify a quicker or cheaper path to completing a credential. As we noted in

the first two papers in this series, **states should provide greater oversight of teach-out institutions to ensure that they are financially viable, offer quality educational opportunities, and provide program alignment to prevent students from having to retake courses.** This recommendation was based in part on the fact several students in our sample experienced more than one campus closure, often within the same institution that operated a chain of institutions.

In the aggregate, our results suggest that states can do more to protect students following a closure. While the results that show that the presence of a student records retention and teach-out policy lead to a greater likelihood of reenrolling within four months, the other results suggest that the four consumer protection policies we analyzed could be improved to better promote reenrollment within one year to improve the likelihood of completion.

POLICY IMPLICATIONS

With the current demographic and financial environment higher education institutions are operating in, we anticipate more institutions will likely close in the coming years. In the following section, we outline actions states can take to improve the primary consumer protection policies to better serve students following a closure.

Require teach-out agreements and student records retention policies. The strongest finding for effective state-level policies in our study was the combined effect of states adopting a record retention and teach-out policy on the likelihood of students reenrolling within four months of a closure. As of 2021, at least 17 states did not have a policy in place that provided for the protection of student records in the event of a closure. Seven of these 17 states did not even have policies in place for the maintenance of student records generally. Students should have access to their records and transcripts to help them transfer to their next institution. Having that access is a basic protection that all states should provide. These policies could follow Washington's lead and provide students with 10 free copies of their transcripts.

States currently operate a range of teach-out policies. Nine states require closing institutions to develop general closure plans; 18 states require the development and/or approval of teach-out plans; and five states have the most rigorous policies requiring the closing institution to develop and enter into teach-out agreements. It should also be noted that 18 states do not require any closure plan or teach-out option for degree-granting institutions. Our recommendation for requiring teach-out agreements acknowledges that teach-out plans are insufficient as a consumer protection for students that experience a closure. States should consider requiring teach-out agreements as part of the initial authorization process and require institutions to maintain and update the agreements as needed through the renewal process. Requiring teach-out agreements well in advance of an institution being at risk of closure will help ensure a smoother transition for students and provide more lead time to identify multiple teach-out partners that offer the same programs in the same modality and within a reasonable geographic proximity. Additionally, if teach-out agreements are required when an institution is initially authorized, there is no stigma attached to developing them. Currently, if a state steps in to require a teach-out agreement, this could be viewed as an indicator that the institution is likely to close and can become a self-fulfilling prophecy. However, if all institutions are required to maintain teach-out agreements, this stigma is removed, and agreements can be implemented when needed. This is also an opportunity for states to better coordinate with accreditors, as requiring teach-out agreements will likely require additional capacity. Working with accreditors to ensure teach-out institutions offer high-quality transfer options will help strengthen the program integrity triad and better protect students.

Expand access to student protection funds and surety bond payouts. Under current state policies, students who experience a closure can access proceeds from student protection funds and surety bonds if they choose to forego teach-out options. In some states, students are not eligible to receive funds from surety bonds, which are reserved for reimbursing the state for expenses incurred as a result of the closure. While these restrictions may help make surety requirements and tuition recovery fund contributions more affordable for institutions, they do not function as student protection policies, as they provide no financial assistance to students or any incentives to reenroll in a new institution. If students are defrauded by an institution, are not able to transfer earned credits, or if the available teach-out institution charges a higher tuition rate, students should be able to access surety and tuition recovery fund payouts to help offset the harm caused by the institution whether they utilize a teach-out option or not. This would require states to remove the current restrictions not allowing students to receive a payout if they utilize a teach-out option. If this policy change is cost prohibitive, states could limit the expanded use of the surety and recovery fund payouts to courses students need to retake and help students achieve tuition parity at teach-out institutions. While some teach-out institutions offer institutional aid to students transferring under a teach-out agreement to help ensure they pay the same amount in tuition and fees at the teach-out institution as they did at the closing institution, states could use surety and protection fund payouts to achieve the same goal.

Increase surety bond requirements and the size of tuition recovery funds. In some states, surety bond requirements are only \$20,000 per institution. While this amount may be adequate to help reimburse states for costs incurred with helping students after an institution closes, it is inadequate to provide any financial support to students. In these states, surety bond requirements should be raised and the benefits extended to students, not just reimbursing the state for expenses. Additionally, tuition recovery funds should be expanded to help ensure they are large enough to help students in the event that multiple institutions close within a short period of time. Currently, many states allow institutions to stop paying into tuition recovery funds once the fund total reaches a certain amount or an institution has paid into the fund for a requisite number of years. These amounts should be stress tested to determine if they are large enough to pay students the full amount owed if multiple institutions close before the fund can be replenished. Even if states do not follow the recommendations above to expand access to tuition recovery funds and surety bonds, these policies should be designed to provide student protections and offer students refunds in cases of fraud, precipitous closure, and other instances where students have been directly harmed by the closing institution.

Require institutions to maintain a surety bond or contribute to a student protection fund. Even though our results did not find a positive association with student outcomes, student protection funds and surety bonds can be important student protection policies that provide refunds to students who have been harmed by a closing institution. States adopting either a surety requirement or student protection fund should follow our recommendations outlined above to make these policies more student centered. As of 2021, 18 states did not require degree-granting institutions to maintain a surety bond to be authorized to operate. Additionally, only 16 states require degree-granting institutions to contribute to a student protection fund. Moreover, these consumer protection policies are not mutually exclusive—14 of the 16 states operating student protection funds also have surety bond requirements for authorized institutions. States that do not currently extend surety bond payouts to students could keep the current surety policy that provides reimbursement to taxpayers for unexpected costs associated with a closure and create a broad-based student protection fund with contributions from all authorized institutions. The student protection fund could be used as a broad insurance pool that can be accessed by any student that suffers expenses that result from an institution closing.

Require institutions to follow a closure plan. These plans should be outlined in administrative rules or statutes and define the actions institutions must follow and the information they must provide to the state. It will also be important for states to have an enforcement mechanism and appropriate penalties for owners and entities that do not follow the closure plan. Currently, several states have policies that prevent owners who have previously defrauded students or closed an institution precipitously from opening a new institution in their state. However, these policies are only effective after a previous closure has already harmed students. States need policies that are proactive and provide incentives for conducting a closure with as much advance notice as possible and planning that protects students and helps employees overcome the disruption of a closure. Imposing and enforcing penalties for individuals that do not follow a closure procedure can help provide these types of incentives. States may want to consider adding personal liability into statutory language for bond requirements to help make it easier to collect funds from individuals.

Reexamine state authorization exemptions. Many states exempt certain institutions from the authorization and renewal process because they were operating before a specified date or have been operating within the state for many years without issue. With the current financial and demographic challenges facing the higher education sector broadly, many long-standing institutions will face increased financial risk. While these long-standing institutions may not need to go through the same rigorous initial authorization process as new providers, these institutions should be required to annually submit financial information and be subject to financial monitoring requirements. Additionally, states could require all institutions to develop teach-out agreements. The effect of these two actions (financial monitoring and teach-out agreements) will help states be better prepared in the event that one of these currently exempt institutions needs to close. The financial monitoring will help states identify which institutions may be under the most financial stress and work with them to develop plans for improvement. Developing teach-out agreements will help ensure students have transfer pathways to complete their current level of credential in a timely manner.

Our three-part research series on the impacts of college closures on student outcomes has identified how detrimental a closure experience can be and provides a starting point for future research studies, as there is still much that we do not know. We conclude by offering recommendations for future studies that build on this paper in particular. Future studies could explore how the outcomes vary by policy differences in states. For example, how do student outcomes vary based on who the beneficiary of the surety bond is? As teach-out agreements become more common in state policies, future research could empirically examine student outcomes for states that require teach-out plans versus the states that require teach-out agreements. Additionally, future qualitative studies could explore the factors that lead students to accept the teach-out option over a surety or recovery fund payout and vice versa.

APPENDIX A. CLOSURES BY STATE, 2004-2020

TABLE A1
CLOSURES BY STATE, 2004-2020

	TOTAL CLOSURES	AVERAGE CLOSURES PER YEAR	AVERAGE CLOSURES PER YEAR PER 1 MILLION FTE
ALABAMA	26	1.5	1.7
ALASKA	7	0.4	7.1
ARIZONA	95	5.6	1.2
ARKANSAS	39	2.3	6.4
CALIFORNIA	423	24.9	2.3
COLORADO	88	5.2	3.6
CONNECTICUT	44	2.6	1.7
DELAWARE	9	0.5	2.0
FLORIDA	226	13.3	2.3
GEORGIA	105	6.2	2.7
HAWAII	23	1.4	4.9
IDAHO	22	1.3	2.1
ILLINOIS	226	13.3	2.7
INDIANA	109	6.4	3.4
IOWA	58	3.4	1.5
KANSAS	53	3.1	5.6
KENTUCKY	75	4.4	4.6
LOUISIANA	52	3.1	3.7
MAINE	21	1.2	3.3
MARYLAND	52	3.1	2.6
MASSACHUSETTS	104	6.1	1.3
MICHIGAN	134	7.9	4.0
MINNESOTA	109	6.4	2.4
MISSISSIPPI	18	1.1	3.1
MISSOURI	149	8.8	3.5
MONTANA	14	0.8	8.8
NEBRASKA	35	2.1	3.6
NEVADA	35	2.1	7.0
NEW HAMPSHIRE	34	2.0	2.3
NEW JERSEY	103	6.1	3.4
NEW MEXICO	31	1.8	9.7
NEW YORK	163	9.6	1.0
NORTH CAROLINA	71	4.2	2.2
NORTH DAKOTA	12	0.7	5.8
OHIO	195	11.5	3.7
OKLAHOMA	74	4.4	7.4
OREGON	44	2.6	3.4
PENNSYLVANIA	234	13.8	2.2
RHODE ISLAND	10	0.6	0.7
SOUTH CAROLINA	46	2.7	3.1
SOUTH DAKOTA	9	0.5	2.8
TENNESSEE	103	6.1	3.4
TEXAS	218	12.8	3.2
UTAH	37	2.2	1.3
VERMONT	13	0.8	2.4
VIRGINIA	104	6.1	2.5
WASHINGTON	85	5.0	4.8
WEST VIRGINIA	17	1.0	1.4
WISCONSIN	123	7.2	6.2
WYOMING	7	0.4	11.8
TOTAL	4,084	4.8	3.7

NOTES:

1. Closures are collapsed from the campus level to the institution level.
2. Closures only reflect institutions in the private nonprofit and private for-profit sectors.

SOURCE: Postsecondary Education Participants System (PEPS)

APPENDIX B. DEFINITIONS

CREDENTIAL COMPLETION: Students who completed a credential after reenrolling post-closure (for treatment students) or after the matched artificial closure date (for control students); includes any students who earned a certificate, associate, bachelor's, graduate, or unknown credential type as of February 2022.

CREDENTIAL LEVEL: Credential level indicates what credential type a student was pursuing at closure or on the matched artificial closure date. Beginning in the 2014-15 academic year, it became mandatory for participating institutions to report program-level data to the Clearinghouse. Prior to 2014, data coverage ranges from 11.6% to 80.7%. Credential level is measured during the last term enrolled at the first closure institution. Students in non-credential programs are classified separately from credit-bearing credential programs. Students in post-baccalaureate certificate programs are classified as students in certificate programs. Students in graduate certificate programs are classified as graduate students.

LENGTH OF STOPOUT: The length of stopout measures the number of days between a student's last enrollment at the closed institution (last term end date) and their enrollment at a subsequent institution (first term begin date). Students who were concurrently enrolled in another postsecondary institution at the time of a closure are considered to have a reenrollment time frame of 0 days. Length of stopout categories were chosen based on the overall distribution of days between a closure and reenrollment. Notably, many of the closed institutions in this sample have continuous enrollment or non-standard enrollment terms. Students whose institution closed at the end of the spring semester and who reenrolled at the beginning of the fall semester may be categorized into reenrollment within one month or reenrollment within one and four months.

REENROLLMENT STATUS: Students are defined as reenrolled if they subsequently enrolled in another postsecondary institution that reports data to the Clearinghouse. Students moving from a main campus to a branch campus or from a branch campus to another branch campus with the same six-digit OPEID were coded as having changed institutions. Students who were concurrently enrolled in another postsecondary institution at the time of the closure are considered reenrollees, as long as the overlapping reenrollment term extends beyond the term end date of the closure term.

TIME TO COMPLETION: Time to completion is measured only for students who earned their first-ever credential after reenrolling after closure or the matched artificial closure date. Time to completion is measured from the first postsecondary enrollment to the completion of the first credential in total time elapsed. Time to completion from closure is measured from closure or the matched artificial closure date to the completion of the first credential in total time elapsed. Time to completion is reported in calendar years and does not account for part-time enrollment or stopouts. Students who were not first-time credential earners are excluded from these calculations.

APPENDIX C. SUPPLEMENTAL TABLES

Supplemental tables are available on the project website at sheeo.org/project/college-closures. These tables contain full regression analyses for the summary tables presented herein.

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