

KNOX PROMISE: COLLEGE PERSISTENCE AND COMPLETION FOR THE FIRST THREE COHORTS

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Executive Summary

Knox Promise provides coaching and need-based financial aid to Knox County high school graduates who enroll in community and technical colleges as Tennessee Promise students.

In this report, we review college persistence and credential completion for the first three cohorts of students participating in Knox Promise. These students entered college in fall 2019, 2020, and 2021, navigating different phases of the COVID-19 pandemic and the shift to and from largely online learning. Available data allow us to summarize enrollment and completion up to 3 years after they started college. This is the second in a series of reports on the Knox Promise program, appending to what Carruthers et al. (2023) reported for the first two cohorts. This report and Carruthers et al. (2023) are some of the first in-depth analyses of programs that supplement the tuition “Promise” offered by statewide programs like Tennessee Promise.¹

Key findings are as follows:

- Three years after starting college, 34% of the 2019 Knox Promise cohort had attained a college credential. This is on par with the 35% six-year graduation rate for Tennessee community colleges. Another 15% of Knox Promise students from the 2019 cohort were still enrolled in college as of the fall 2022 semester.
- College persistence and completion rates were somewhat lower for Knox Promise students who enrolled in fall 2020, compared with the cohorts before and after. We find that 59% of the 2020 cohort re-enrolled for fall 2021 or completed a credential by that term, compared with 66-68% for the 2019 and 2021 cohorts. Just 21% of the 2020 cohort earned credentials 2 years after starting college, although another 30% were still enrolled at that point in time.
- Students who engaged with Knox Promise coaches were much more likely to persist into their second year of college and more likely to complete college credentials within 2-4 years. For example, a Knox Promise student who enrolled in fall 2020 and connected with their coach at least three times that year was three times more likely to attain a college credential within 2 years than a 2020 Knox Promise student who did not engage with coaching (30% versus 10%).
- Students who received need-based and emergency grants from Knox Promise were as likely or more likely as other Knox Promise students to persist into their second year of college (60-72% versus 53-64%), and they were as likely or more likely to attain a college credential 2 – 3 years after starting college (28-35% versus 20-34%).

Up front, we emphasize that results in this report are purely descriptive and should not be interpreted as causal effects of Knox Promise.

In the sections to follow, we review Knox Promise programmatic details as described by Carruthers et al. (2023), describe the data used in this follow-up analysis, and then report our findings on college persistence and completion for Knox Promise students. We conclude with a preview of the scope of future reports in this series, including quasi-experimental analyses that will shed more light on the causal links between Knox Promise eligibility and college completion.

¹ Dickason et al. (2023) study a similar program based in Nashville, Tennessee (Nashville GRAD), pairing qualitative insights from student interviews with quantitative data on college outcomes.

Knox Promise Program

Knox Promise was designed to increase college attendance and graduation, beginning as a pilot serving the 2019-2021 cohorts of Knox County high school graduates. The program is a financial aid and mentoring supplement to Tennessee Promise, which has provided tuition-free community and technical college to high school graduates since 2015. In 2022, major components of Knox Promise launched statewide through the tnAchieves COMPLETE program.

Tennessee Promise is a last-dollar scholarship, meaning that the program covers any remaining tuition and fee balances after other grants and scholarship have been applied. Last-dollar scholarships like Tennessee Promise tend to provide less financial aid to lower-income students, who qualify for need-based federal and state grants that oftentimes exceed community and technical college tuition. In addition, tuition-only scholarships cannot assist with nonacademic expenses that may derail a student's progress toward a degree. Knox Promise provides an additional layer of college coaching and need-based financial aid for all Knox County high school graduates who enroll in a community or technical college and retain their Tennessee Promise eligibility.

Knox Promise financial support includes need-based completion grants and funding up to \$1,500 per term for nonacademic expenses. Completion grants are available to lower-income Tennessee Promise students who are eligible for Federal Pell grants, who submit a request with documented need, and who have been in contact with a tnAchieves Completion Coach. The grants can be used toward \$100 in transportation (gas, rideshare, or a bus pass), \$100 for grocery gift cards, a standard computer, materials required in a class syllabus, rent and utilities debt, credit at the college bookstore for textbooks, and class fees. Each category requires a separate grant request. Specific needs cited by Knox Promise students include college fees, financial help to overcome homelessness and unemployment, healthcare costs during COVID-19, childcare costs, and groceries. The main request categories in 2019 and 2020 were books and supplies (22 percent), transportation (16 percent), food (13 percent), gas (10 percent), and housing (10 percent) with the largest disbursements allocated, in total, toward books (\$41,697), housing (\$34,400) and gas and transportation (\$27,529). Disbursements on average covered 70 percent of what students requested.

Each Knox Promise student is matched with dedicated tnAchieves completion coaches who provide personalized degree roadmaps and general academic guidance. Coaches proactively communicate with students in person or by text, email, and on virtual platforms. In addition to coaches, each student is assigned to a Tennessee Promise mentor. Mentors are volunteers from throughout the community who work with 5-10 students over the transition from 12th grade to college. Mentors are expected to commit about an hour per month to their Tennessee Promise mentees, to act as role models, and to provide encouragement and help with various aspects of the college transition. Knox Promise college coaches overlap in some of the same roles as mentors but represent a more intensive form of academic guidance, with more detailed knowledge of institutional pathways and resources for students.

Data

Data for this report come from tnAchieves, a nonprofit organization that manages Knox Promise. De-identified program data include lists of participating students, completion grant requests and awards, records on the type and frequency of connections between Knox Promise students and completion coaches (in-person meetings, virtual meetings, text messages, etc.), and semi-regular data on participating students' enrollment and credential completion status.

Our analysis focuses on the percent of each cohort who attained a post-secondary credential (specifically a certificate, diploma, or degree), or who did not have a college credential but were still enrolled in any higher education institution up to 3 years after high school. tnAchieves collects these data from two sources: the institutions Knox Promise students attend (specifically, 14th-day census rolls from public colleges and universities in Tennessee), and the National Student Clearinghouse (NSC). The NSC is a nonprofit organization that maintains college enrollment and completion records for an estimated 97% of enrollments in the United States.² tnAchieves requests NSC data on a staggered schedule for students who are not found in in-state enrollment records.

tnAchieves enrollment and completion records have non-uniform coverage across students and cohorts for the fall 2019 term through the fall 2022 term. These data allow us to determine, on an annual basis, if a Knox Promise student obtained a postsecondary credential or if they were still enrolled. Program records do not generally follow students after credential completion. Due to this and the program's staggered NSC extracts, we are not able to construct a term-by-term panel of student enrollment and completion detail.³ We focus on annual outcomes and report the share of each cohort who have attained a credential or are still enrolled in college at three points in time:

- **1 year after initial college enrollment:** as of the beginning of the fall 2020 term for the 2019 cohort, fall 2021 term for the 2020 cohort, or fall 2022 term for the 2021 cohort
- **2 years after initial college enrollment:** as of the beginning of the fall 2021 term for the 2019 cohort or fall 2022 term for the 2020 cohort
- **3 years after initial college enrollment:** as of the beginning of the fall 2022 term for the 2019 cohort

² <https://www.studentclearinghouse.org/colleges/studenttracker/>

³ Our companion report included findings from tnAchieves program records as well as matched data on participating students in state administrative "P-20" data (Carruthers et al., 2023). P-20 data include more granular enrollment and credential data but with a lag of at least one year. In addition, P-20 data exclude a small number of students from tnAchieves records who do not match any records in state administrative files, as well as enrollments in most private institutions and all out-of-state institutions. For these reasons we prefer tnAchieves program records for persistence and completion figures, but where possible, we have cross-checked our enrollment and completion computations between tnAchieves and P-20 data.

Results: College Persistence and Completion for the First Three Knox Promise Cohorts

Table 1 summarizes socioeconomic characteristics of Knox Promise students, by cohort (Columns 1-3), with characteristics of all Tennessee Promise students included for comparison (Column 4).⁴

As reported by Carruthers et al. (2023), Knox Promise students in the 2019 and 2020 cohorts were less likely to be Black, Hispanic, eligible for need-based Pell grants, or the first in their families to attend college, relative to all Tennessee Promise students statewide. This is consistent with Knox County having a less racially diverse population than the rest of the state, as well as higher average income.⁵

Table 1 shows that these patterns intensified somewhat with the 2021 cohort. Students in the third Knox Promise cohort were slightly more likely to be white (80%) than in the prior two cohorts (78-79%), 28% likely to be first-generation college students (versus 39% for all Tennessee Promise students), and 38% likely to be Pell eligible (versus 53% statewide). Expected family contribution, a proxy for students' ability to pay for college, was larger among Knox Promise students compared with the rest of the state.

Table 1. Socioeconomic summary statistics.

	Knox Promise Enrollees	Knox Promise Enrollees	Knox Promise Enrollees	All TN Promise Enrollees
Cohort	2019	2020	2021	2019, 2020, 2021
	(1)	(2)	(3)	(4)
Black or African-American	11%	10%	8%	14%
Hispanic	5%	6%	8%	7%
White	78%	79%	80%	74%
First Generation	32%	30%	28%	39%
Pell Grant Eligible	48%	45%	38%	53%
Expected Family Contribution	\$6,740	\$9,123	\$11,630	\$5,245
Number of students	1,425	1,459	1,310	48,662
Black or African-American	11%	10%	8%	14%

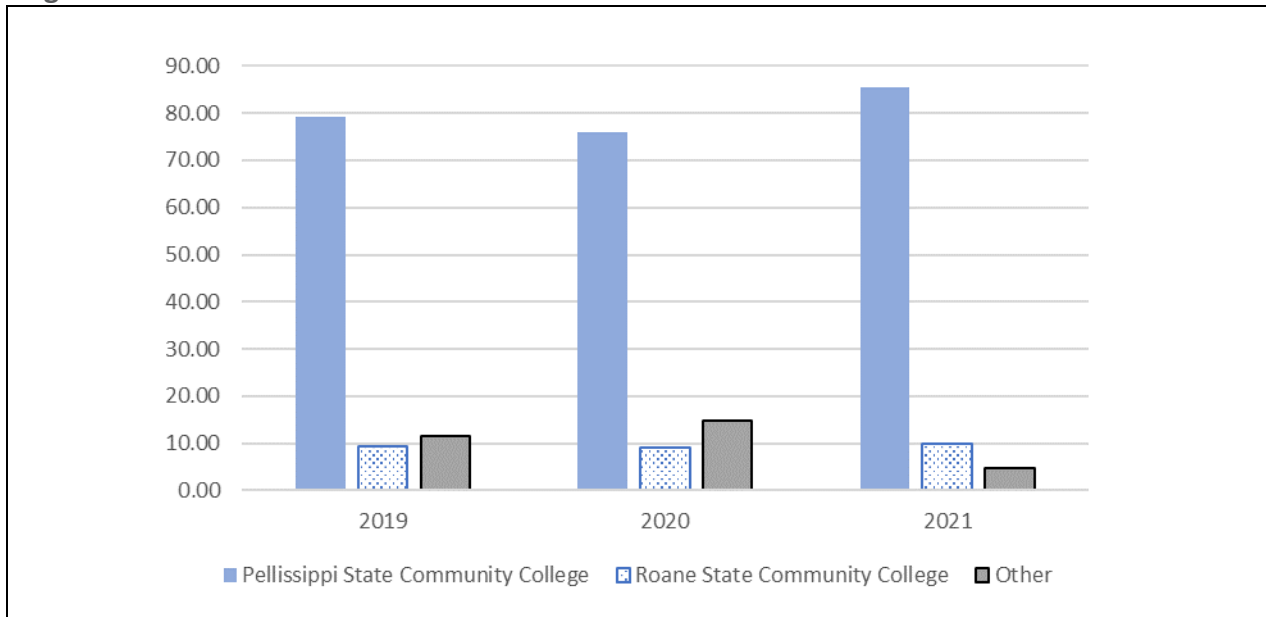
Source: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

Figure 1 displays where Knox Promise students initially enrolled, by cohort. A large majority of each cohort (76-85%) enrolled in Pellissippi State Community College. Roane State Community College was the next most common institution (9-10%), followed by several two-year and four-year institutions with very small Knox Promise enrollments.

⁴ Table 1 statistics for the 2019 and 2020 cohorts are similar but not identical to what Carruthers et al. (2023) reported. This is due to small differences in the number of participating students in tnAchieves program records and the number of participants who can be matched to state administrative data.

⁵ In 2020, 79.2% of the Knox County population was white, non-Hispanic, versus 72.2% of Tennessee (<https://arcg.is/OeWzy8>). In 2021, per capita personal incomes were about 6% higher in Knox County than in Tennessee overall (<https://fred.stlouisfed.org/graph/?g=XOOz>).

Figure 1. Knox Promise Students' First Institution



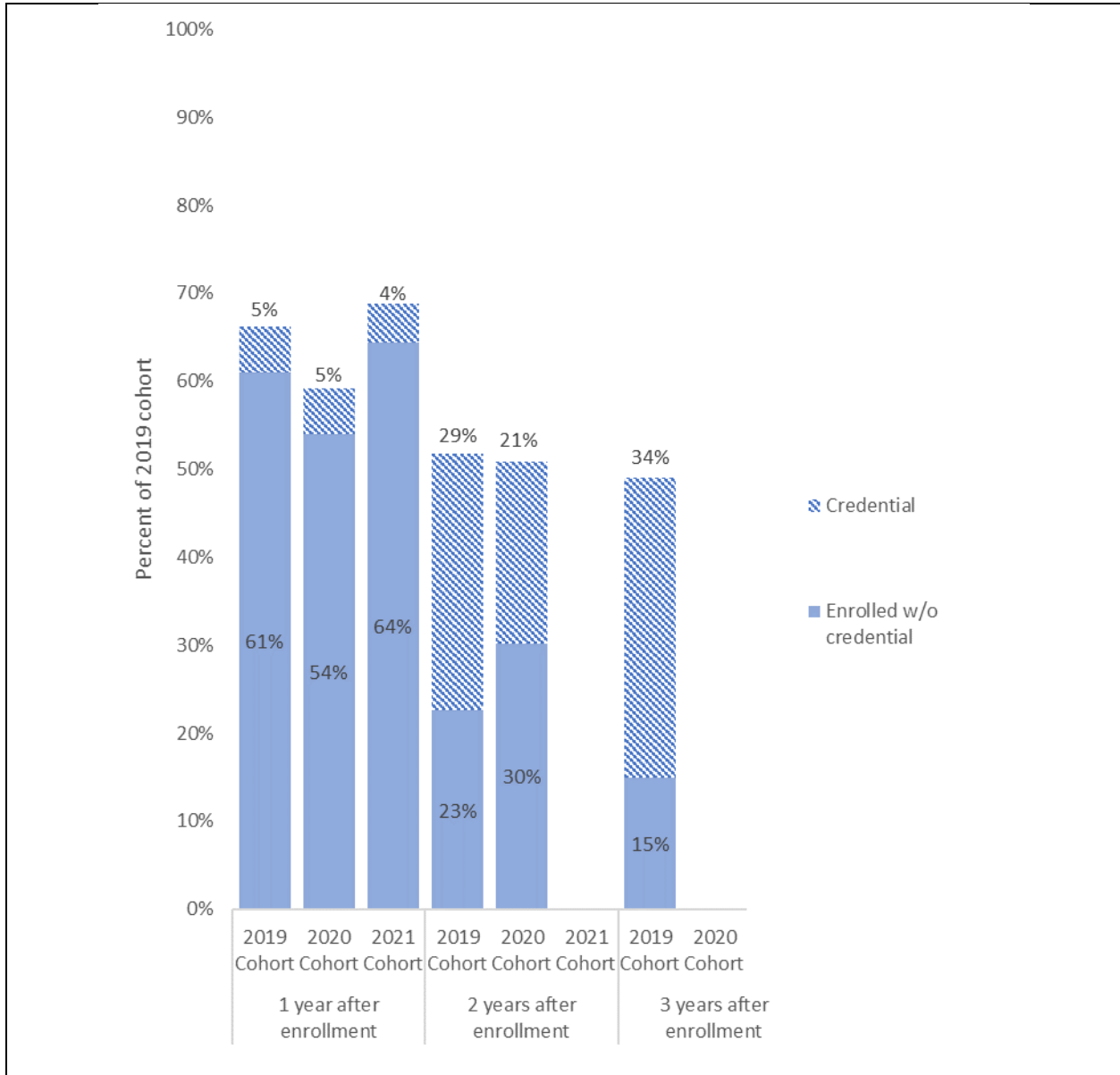
Notes: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

Figure 2 illustrates Knox Promise students' persistence and credential completion outcomes, by time since initial enrollment and cohort. For each Knox Promise student in the 2019, 2020, and 2021 cohorts, tnAchieves records allow us to determine if they had completed a certificate, diploma, or degree at three points in time: 1 year after initial enrollment (i.e., as of the beginning of their second fall term), 2 years after initial enrollment (as of their third fall term), or 3 years after initial enrollment. The percent of each cohort with credentials at or before those points in time is represented by the patterned portion of each stacked bar in Figure 2. For those students who had not completed credentials, we can observe if they were still enrolled in higher education, even if they were enrolled somewhere other than where they started college.⁶ The percent of each cohort without credentials but still enrolled at a point in time is represented by the solid portion of each stacked bar.

Focusing first on the 2019 Knox Promise cohort, we find that 5% had completed a credential by the end of the second fall term, i.e., 1 year after starting college. An additional 61% were still enrolled. Credential completers grew to 29% of the 2019 cohort after 2 years in college. After 3 years in college, about 1 in 3 members of the 2019 Knox Promise cohort (34%) had completed a credential, and another 15% were still enrolled.

⁶ Some credential completers continue to enroll in classes in pursuit of additional certificates, diplomas, or degrees, but we cannot consistently identify students who are both enrolled and holding credentials in tnAchieves records.

Figure 2. Knox Promise Students' College Persistence and Completion



Notes: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

The 2020 Knox Promise cohort enrolled during a tumultuous phase of the COVID-19 pandemic and amid historic declines in college enrollment for new high school graduates in Tennessee and the U.S. more broadly (National Student Clearinghouse, 2023; THEC/TSAC, 2022, 2023). This may be part of the reason why a smaller share of the 2020 cohort were still in college after 1 year, compared with the 2019 cohort (54% versus 61%). In addition, a smaller share of the 2020 cohort had attained a credential by the beginning of their third fall term (21%, down from 29% in the 2019 cohort), although a relatively large percent of 2020 students were still enrolled at that time (30%, up from 23% in the 2019 cohort).

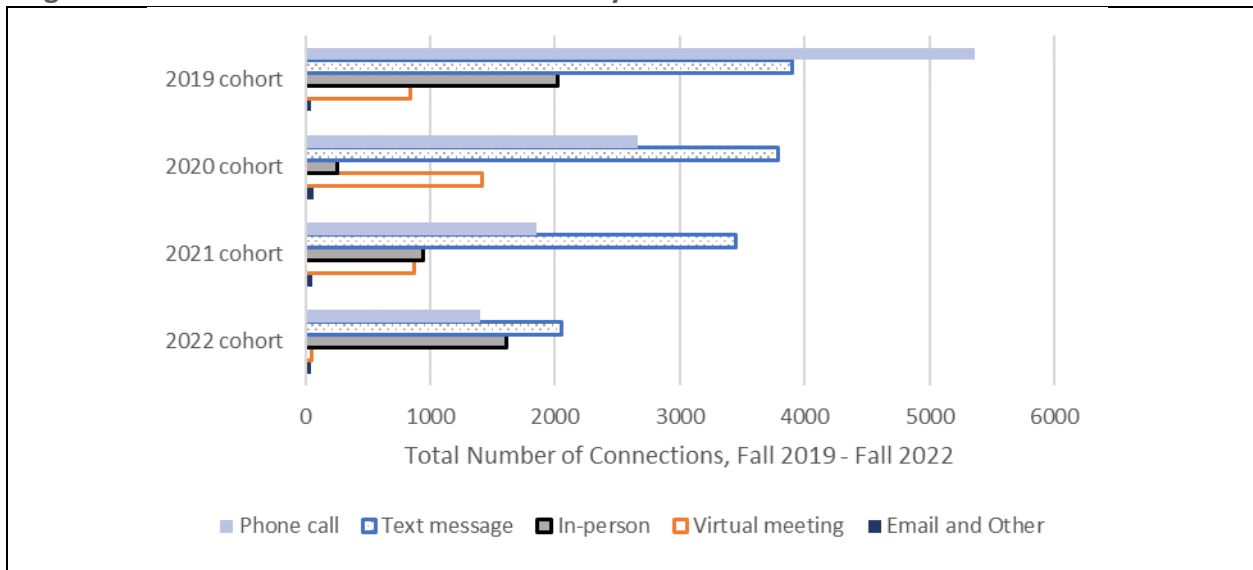
Early indicators for the third Knox Promise cohort, who enrolled in fall 2021, suggest that fall-to-fall persistence rebounded to an extent. Almost two-thirds of the 2021 cohort (64%) were still enrolled for their second fall term, and another 4% completed a credential prior to that term.

College Outcomes by Frequency of Knox Promise Coach Connections

Knox Promise provides students with various financial and non-financial supports, including college coaches. The organization records how many connections are made between each student and their coach, each term. **Figure 3** illustrates the total number of connections between fall 2019 and fall 2022, by mode and cohort.

The Knox Promise 2019 cohort has had more connections than the others, in part because more time has elapsed since they joined the program. Phone calls were the most common way that coaches interacted with students in the 2019 cohort, followed by text messages, in-person meetings, and virtual meetings. Text messages became the most common mode of communication for the 2020 and 2021 cohorts, followed by phone calls. The 2020 cohort had far more virtual meetings with coaches than in-person meetings. By contrast, the 2021 cohort had a more balanced mix of in-person and virtual meetings, and the 2022 cohort had almost no virtual meetings.

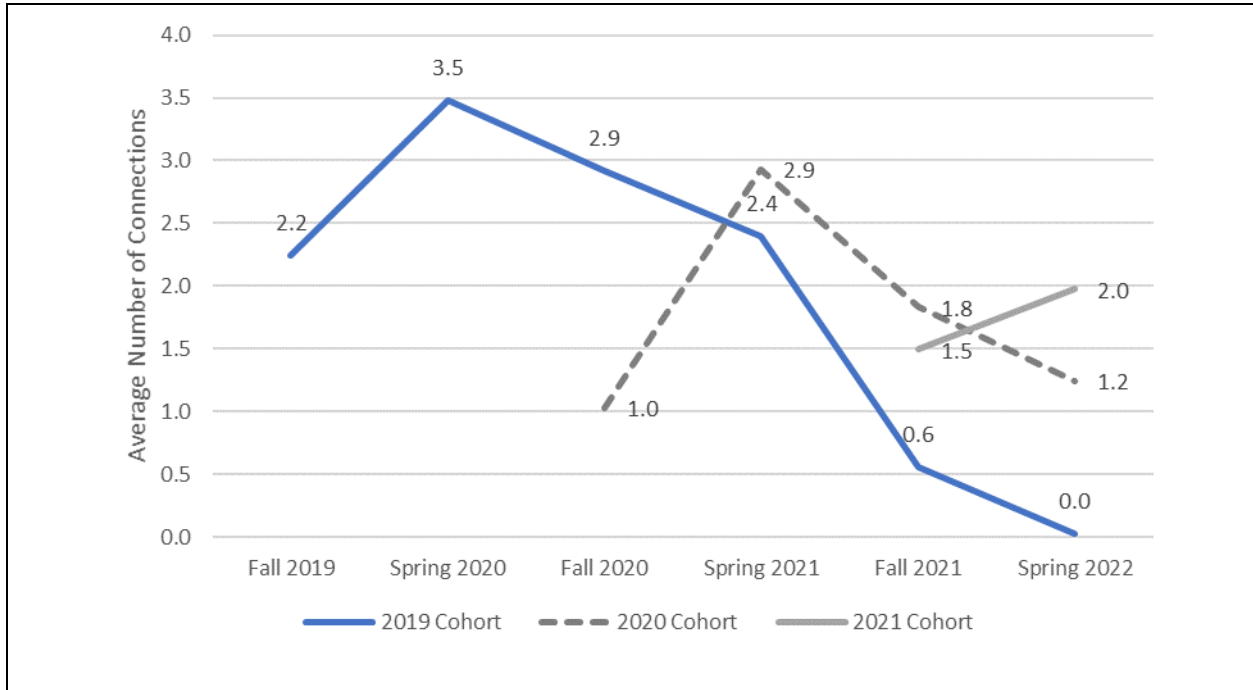
Figure 3. Knox Promise Coach Connections by Cohort and Mode



Source: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

Figure 4 plots the average number of connections between Knox Promise students and their coaches, by term. Participating students typically have 1-2 coach connections in their first semester, and 2-4 in their second. After their first year in college, students tended to engage with coaches less and less often, although it remains to be seen if the 2021 cohort will follow the same pattern. Another pattern evident from Figure 4 is that the 2019 cohort tended to have more coach connections than later cohorts.

Figure 4. Average Number of Knox Promise Coach Connections by Cohort and Term



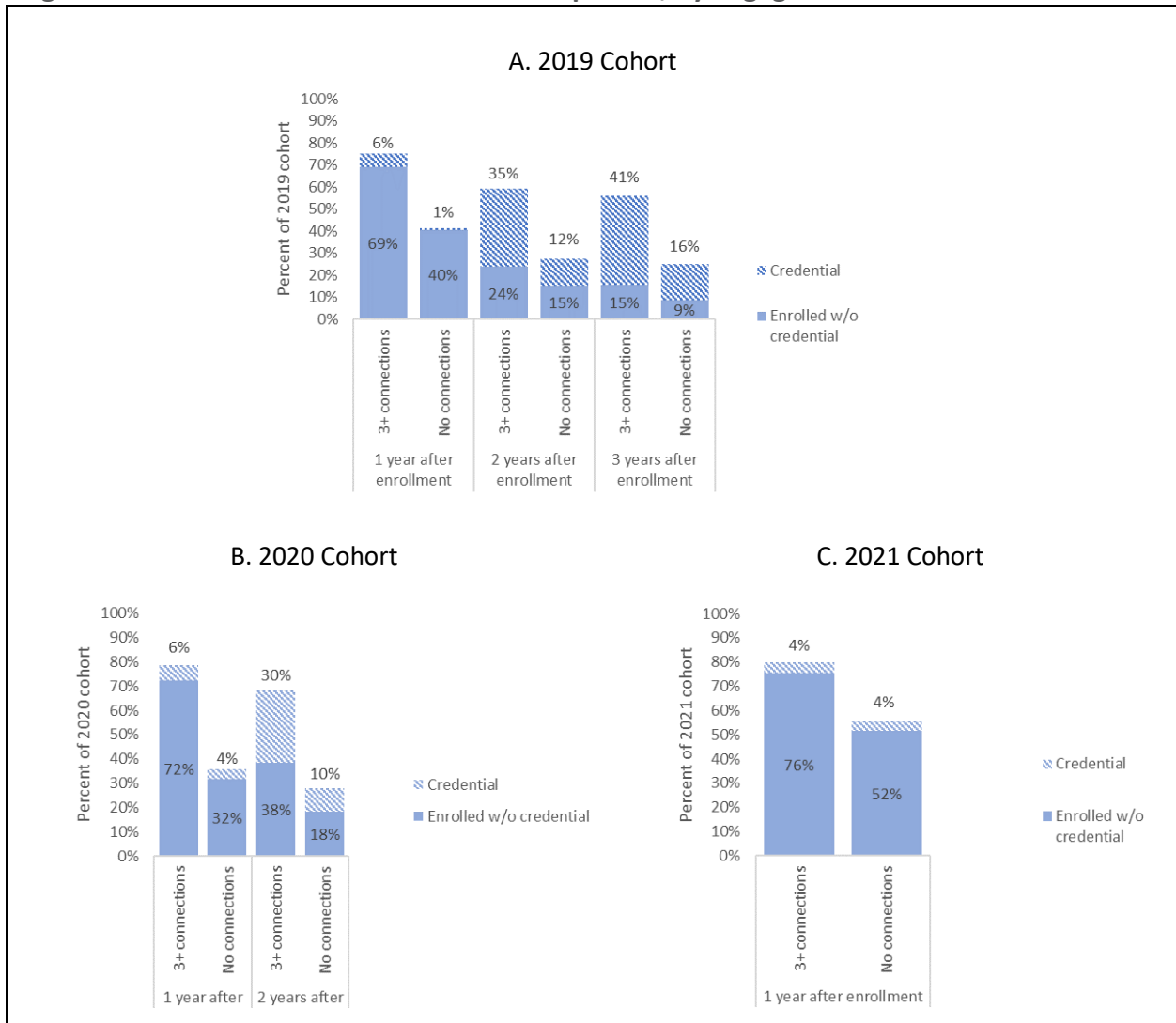
Source: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

Figure 5 depicts college persistence and credential completion by cohort, time since initial enrollment, and the degree of engagement with coaches. Each figure compares students who had 3 or more coach connections in their first year (a lower-than-average rate of engagement) with students who had no coach connections.⁷

We find that students who were more engaged with Knox Promise coaches were more likely to have completed credentials, starting 2 years after initial enrollment. Looking first to Panel A of Figure 5, we find that 35% of connecting students in the 2019 cohort had a college credential 2 years after they first enrolled, which is on par with the national three-year graduation rate from two-year colleges (U.S. Department of Education, 2023) as well as the six-year graduation rate from Tennessee community colleges (THEC, 2023). By contrast, only 12% of non-connecting students in the 2019 cohort completed credentials within 2 years of enrolling. The gap between connecting and non-connecting students widened one year later, by which time 41% of connecting students had attained a college credential.

⁷ In Carruthers et al. (2023), we defined connecting students as those with 3 or more connections in a given semester. Here, we shift to a grouping that is stable across students' time in college—specifically, having 3 or more connections in their first year of college. Figure 5 statistics are therefore not direct replications of our earlier findings, although conclusions about the gap between connecting and non-connecting students are very similar.

Figure 5. Knox Promise Persistence and Completion, by Engagement with Coaches



Source: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

The pattern is similar for the 2020 cohort (Panel B), although both connecting and non-connecting students had slightly lower completion rates 2 years after starting college: 30% and 10% for the 2020 cohort, respectively, versus 35% and 12% for the 2019 cohort.

It is too early to determine if the 2021 cohort of connecting students will likewise complete more credentials than non-connecting students. After potentially 1 year in college, both connecting and non-connecting students in the 2021 cohort were 4% likely to have attained college credentials. But as seen in Panel C of Figure 5, connecting students' fall-to-fall retention rate is much higher (76% versus 52% for non-connecting students) and similar in magnitude to what we observed for the prior two cohorts of connecting students (69-72%).

Why are coach connections associated with a better chance of completing college? These findings are consistent with what Carruthers et al. (2023) reported for the 2019 cohort’s first two years in college, where we went on to show that students who were more engaged with their coaches completed more of their attempted credits, on average, and had better grades. Nonetheless, it is difficult to identify the causal pathways between Knox Promise coaches and college outcomes. The Knox Promise mission is to help students succeed in college, and coaching is one part of their strategy. It is possible that coaches have a direct impact on student success, as intended. Engaging with coaches is a choice, however, driven by unobserved factors that likely have their own effect on success in college: for example, a student’s intrinsic motivation, their availability to meet with coaches around other responsibilities, and the complexity of their day-to-day challenges in school. The true effect of Knox Promise coaching could be larger or smaller than the gaps depicted in Figure 5.

College Outcomes with versus without Knox Promise Completion Grants

Completion Grants offer up to \$1,500 per academic period to be spent on transportation, class supplies, groceries, and various living expenses that may support success in college, and students can make multiple requests per term. In practice, they cite many different reasons for needing funds: books and supplies were the most common for the 2019 and 2020 cohorts, followed by transportation, food, gas, and housing.

Table 2 summarizes completion grant disbursements by cohort and academic year. The number of students in each cohort who received grants declined over time as they either left or completed the program. Across cohorts, average grants were smaller in the 2021-22 school year (\$147-194) than in the prior two years (\$252-319). This may be due to more intense disruptions from the pandemic during 2019-20 and 2020-21.

Table 2. Knox Promise Completion Grant Disbursements

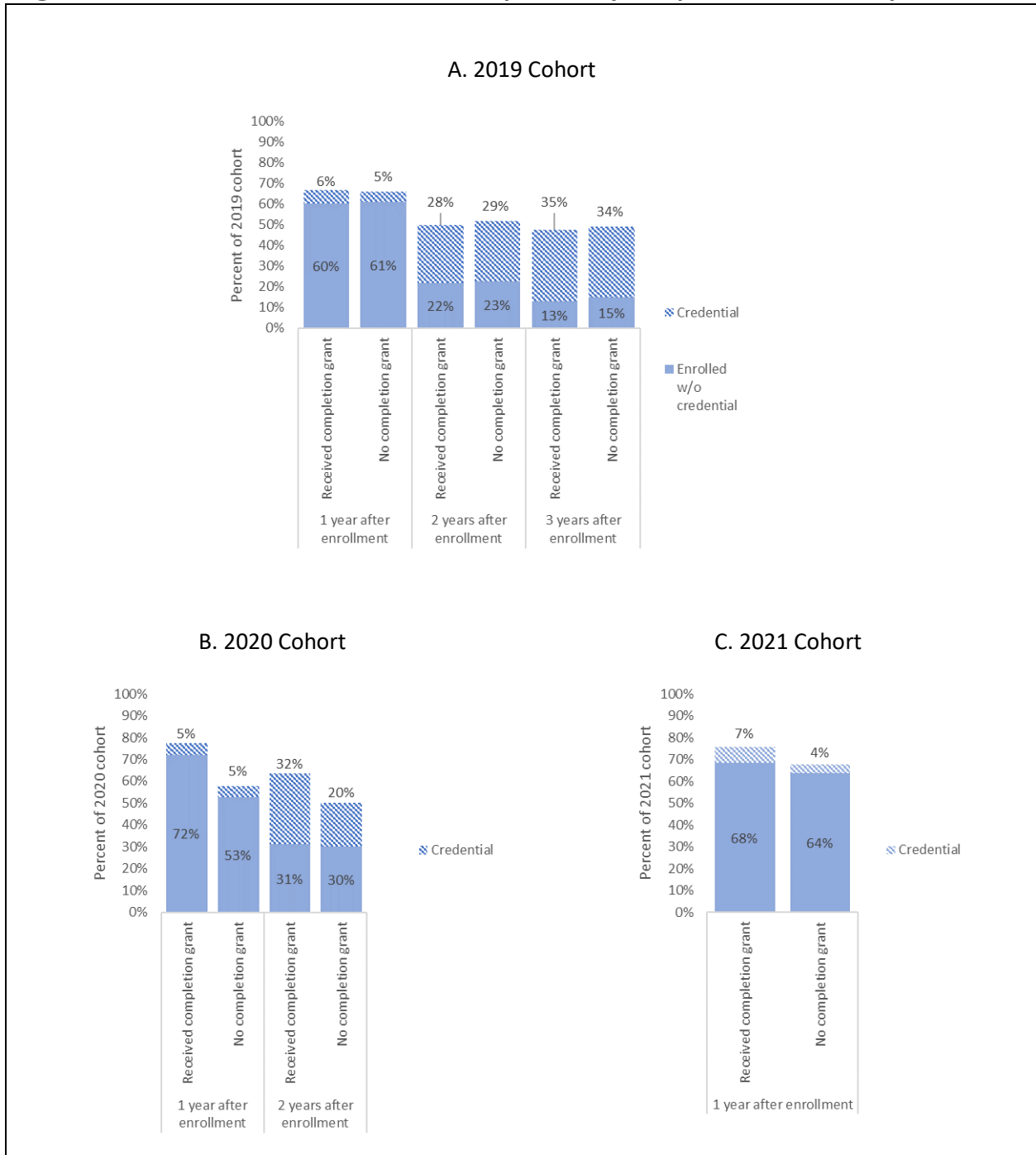
		School Year		
		2019-20	2020-21	2021-22
2019 Cohort	Average Grant Disbursement	\$319	\$252	\$194
	Grant Recipients	78	86	22
2020 Cohort	Average Grant Disbursement		\$276	\$163
	Grant Recipients		93	71
2021 Cohort	Average Grant Disbursement			\$147
	Grant Recipients			149

Source: Authors calculations using tnAchieves program records and statewide P-20 longitudinal data on high school graduates enrolling directly in community colleges. Cohort refers to the fall semester of students’ first year in college.

Figure 6 summarizes college persistence and completion for students who received completion grants during their first year in college, compared to the same outcomes for students who did not receive completion grants in their first year. As with coach connections, these comparisons are for reference and we do not consider them to represent causal effects of completion grants on student outcomes. Students who requested financial assistance, and who had their grant requests approved, may have been different from other students in unobserved ways that also affected their prospects for completing college.

Consistent with Carruthers et al. (2023), we find that Knox Promise grant recipients were more likely to attain college credentials than non-recipients. The gap is much smaller than Figure 5 differences between connecting and non-connecting students. In the 2019 cohort, for example, grant recipients were 35% likely to have obtained a college credential 3 years after they started college, versus 34% for non-recipients. The gap is wider for the 2020 cohort after 2 years: 32% of 2020 grant recipients completed credentials in that timeframe versus 20% of non-recipients. Not enough time has passed to assess completion rates for the 2021 Knox Promise cohort, but 1 year after they started college, we can already see small retention and completion gaps favoring grant recipients.

Figure 6. Knox Promise Persistence and Completion, by Completion Grant Receipt



Source: Authors' calculations using tnAchieves program records. Cohort refers to the fall semester of their first year in college.

Conclusions and Next Steps for Research

This is the second in a series of reports on Knox Promise, joining Carruthers et al.'s (2023) analysis of the 2019 and 2020 cohorts. The companion report relied on tAchieves program records for those cohorts, merged with statewide P-20 administrative data. This allowed for a rich picture of student enrollment, completion, earned credits, and grades for the 2019 cohort's first two years in college, and for the 2020 cohort's first year in college. One of our key findings in Carruthers et al. (2023) was that students who were more engaged with Knox Promise coaching, or who received completion grants, tended to complete more college credits, have better grades, and were more likely to stay in college and complete postsecondary credentials.

In this updated analysis, we use program data to extend the timeline through the fall 2022 term, albeit without P-20 data on credits or grades. This allows us to compute graduation rates 3 after the 2019 Knox Promise cohort started college and 2 years after the 2020 cohort started college, both longer than the "normal" two-academic-year timeline for completing long-term diplomas and associate's degrees. In addition, we observe early persistence and completion outcomes for the 2021 cohort of Knox Promise, up to 1 year after they first enrolled.

We find that about 34% of the first Knox Promise cohort completed credentials within 3 years after starting college in fall 2019, similar to the statewide 6-year graduation rate for Tennessee community colleges and approaching the 38-39% 6-year graduation rate for Pellissippi State Community College, where the vast majority of Knox Promise students enroll. The 2020 cohort had lower rates of fall-to-fall persistence and lower rates of credential completion through their first 2 years in college: just 21% completed credentials by fall 2022, although another 30% were still enrolled. The 2020 cohort enrolled in the midst of the COVID-19 pandemic and had a very different and more online college experience than their peers who began college in 2019 or 2021. Future reports in this series will be able to determine if the 2020 cohort caught up to any extent in later terms. Early indications for the 2021 cohort point to a rebound in fall-to-fall persistence, although it is too early to determine if this will correspond with a return to higher graduation rates for Knox Promise students.

Echoing Carruthers et al. (2023), we again find that Knox Promise coaching and completion grants are associated with more student success in college. Students who engaged with these supports—particularly those who were more engaged with Knox Promise coaches—were more likely to return for a second year of college and more likely to earn college credentials.

Reports to follow will add further detail to this picture with insights on Knox Promise student transfer, program and major choice, the type of credentials that participating students earn, and workforce outcomes during and after college. In addition, we will study how the Knox Promise model affected college persistence and completion as it phased in from one county to the rest of the state. The program's introduction in 2019-2020 as well as its transition from Knox Promise to COMPLETE in 2022-2023 give us the opportunity to enhance descriptive findings with a more causal analysis of whether and how initiatives like Knox Promise help students stay in college and ultimately complete college credentials.

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