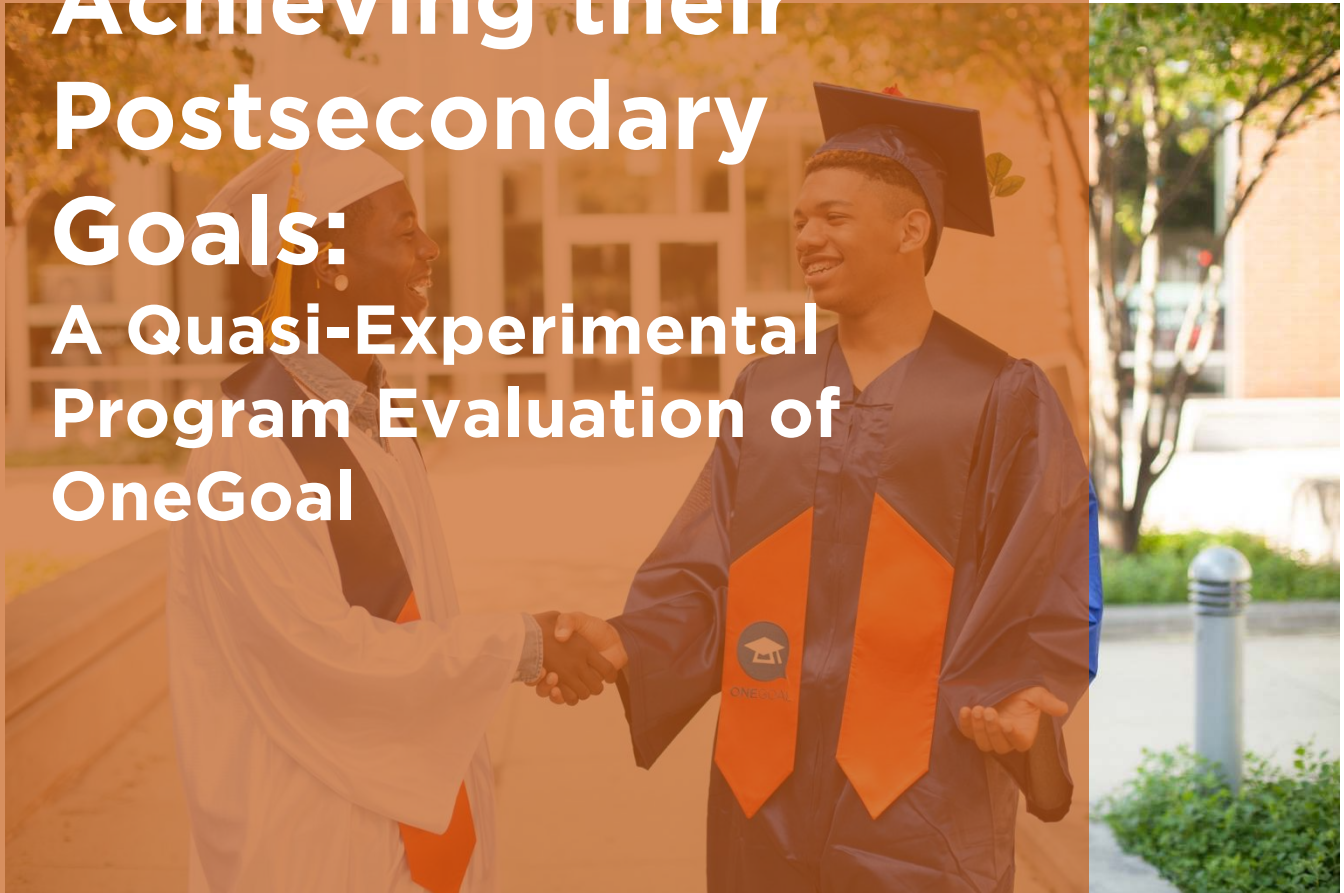


Supporting Students in Achieving their Postsecondary Goals: A Quasi-Experimental Program Evaluation of OneGoal



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About the University of Chicago Inclusive Economy Lab

For generations, government policies and institutional choices have excluded many Americans—and especially the Black and Latinx communities—from opportunities for education, employment, and wealth creation. Ending intergenerational poverty and building an inclusive economy—one that provides real economic opportunities for all communities—requires collaboration across sectors, as well as scientific evidence about what works and what doesn't. Traditional research can take years, and the results often don't reach those who need the information most—the people living with and working on these issues. The University of Chicago Inclusive Economy Lab solves this by working with policymakers, organizations, and communities to identify their most urgent and pressing challenges, co-generate evidence about what works, and translate that evidence into real policy changes that expand economic opportunity and improve lives.

Acknowledgements

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Executive Summary

Young people in Chicago have a myriad of aspirations, and for nearly 70 percent of high school freshmen, attending and graduating from college, a milestone that increases the likelihood of higher lifetime earnings, social mobility, and long-term job security, is of high importance (Nagaoka, Seeskin, & Coca, 2016). However, due to inequities in the education system and other systemic barriers, they do not always have the resources or guidance to navigate the complex college application process.

OneGoal targets these barriers to support students in achieving their postsecondary goals. The University of Chicago Inclusive Economy Lab partnered with OneGoal and Chicago Public Schools (CPS) to examine the effectiveness of OneGoal's program model and to provide empirical evidence about whether the components theorized to improve college success made a difference for students from low-income households.¹ In pursuit of this, the Inclusive Economy Lab conducted a quasi-experimental impact evaluation, looking at OneGoal Fellows who were expected to graduate from high school between the years of 2011- 2020. More than 7,000 OneGoal Fellows were included in this analysis. Over the course of this work, we sought to answer the following research questions:

1. What is the effect of the OneGoal program on students' high school academic outcomes?
2. What is the effect of the OneGoal program on students' enrollment in a postsecondary institution?
3. What is the effect of the OneGoal program on college persistence and graduation (within six years of expected high school graduation)?

To measure the program's impact, the research team used a propensity score matching (PSM) technique to understand what would have happened to each program participant if they had not joined the program. PSM was used to identify students in CPS with similar observable characteristics to those of OneGoal Fellows. This process allows any differences in outcomes between the groups to be attributed to the work of OneGoal, controlling for the impact of other observable factors for which data were available. Note that propensity score matching cannot rule out unobservable differences (e.g., intrinsic motivation or student preferences) between participants and non-participants.

This report shares the results of the propensity-score matching analysis and provides inferences into the effectiveness of the program in producing positive scholastic results for OneGoal Fellows. Comparing OneGoal Fellows to similar students who did not participate in OneGoal programming, we looked at OneGoal's effect on the following student outcomes: high school standardized test scores, high school senior year GPA, high school graduation, number of college applications, direct college enrollment, met or exceeded college match rates, year-to-year college persistence, and college graduation. ***Our study found evidence that OneGoal has a strong, positive, and statistically significant effect on postsecondary enrollment, persistence, graduation and nearly all academic outcomes of interest.*** This report and the key findings aim to provide a deeper look into OneGoal's program model and the impact of their supports on student success.

¹ For the purposes of this study, "low-income households" were defined as living below a median income threshold or otherwise used to describe students living in financial vulnerability (Ahلمان, 2019).

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Research shows that having a college degree can support greater social mobility and help students earn a family-sustaining wage in adulthood (Haskins, Isaacs, & Sawhill, 2008; Morin, Brown, & Fry, 2014). Nationwide, about 55 percent of students born into families in the lowest income quintile will move into a higher income quintile later in life with a high school diploma; however, that number increases to around 84 percent for students who earn a college degree (Haskins et al., 2008). The benefits of a college degree align with student aspirations. For example, Chicago Public Schools (CPS) recently reported that nearly 70 percent of high school freshmen voiced a desire to complete college and obtain a bachelor's degree (Nagaoka, Seeskin, & Coca, 2016).

Despite this stated aspiration, in Chicago and across the nation, students face an inequitable education system, rife with barriers to educational attainment that disproportionately affect students of color and students from lower-income backgrounds. Community-level disinvestment, residential segregation, discriminatory practices and more have all combined to create a system wherein students who grow up in lower-income households—disproportionately Black and Latinx—enroll in and complete college at much lower rates than students who grow up in middle-income families (Chetty, Friedman, Saez, Turner, & Yagan, 2017). As of 2017, 62 percent of students from families in the highest income quartile were estimated to earn a bachelor's degree by age 24, compared to only 13 percent of those from families in the lowest income quartile (Cahalan, Perna, Yamashita, Wright-Kim, & Jiang, 2019). In CPS, where the majority of students are Black or Latinx and from low-income families, only about 18 percent of students will earn a bachelor's degree within 10 years of high school, despite high levels of interest (Chicago Public Schools, 2021; Nagaoka, Seeskin, & Coca, 2016).

Gaps in educational attainment by family income exist for myriad reasons. On the individual level, research shows that higher cognitive skills at the kindergarten level strongly predict later academic achievement (Duncan et al., 2007; Nagaoka, Farrington, Ehrlich, Heath, Johnson, Dickson, Turner, Mayo, & Hayes, 2015). When comparing high-income and low-income families, higher-income families have an increased ability to invest more in their children's early education and typically have more resources to spend on their children's educational activities—a reality that is often not the case for lower-income families. As a result, children at varying income levels begin their educational careers with differential levels of advantage, leading to disparities in cognitive skills by kindergarten, and implications for long-term educational attainment. In fact, the gap in spending on children between affluent and poor families has tripled in the last few decades, alongside comparable growth in income inequality and in the academic achievement gap between children from poorer and affluent households (Duncan & Murnane, 2011; Kaushal, Magnuson, & Waldfogel, 2011; Reardon, 2011). The advantages accruing to children from higher-income backgrounds compound over time and heavily contribute to their preparation for success in a college environment from an early age, students from low-income backgrounds face systemic barriers that limit their opportunity to prepare for academic success in college.

On a systemic level, as school funding is primarily based on local property taxes, residential segregation along racial and economic lines leads to disparities in school resources and quality (Adamson & Darling-Hammond, 2012). The result is that students from middle- and upper-class families are more likely to attend highly resourced schools that often have higher expenditures per pupil, smaller student-counselor ratios, and a rich array of courses designed to prepare

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students for the academic demands of college, giving them a strong advantage in building an academic foundation for college success (Charles, 2003; Kozol, 1991; Lareau & Goyette, 2014; Ostrander, 2015; Vigdor & Ludwig, 2007).

Disparities in educational quality by income are also intricately tied to disparities by race. Racial discrimination against Black and Latinx Americans in housing (Yinger, 1998), home mortgage rates (Ross & Yinger, 1999), hiring decisions (Bertrand & Mullainathan, 2004; Pager, 2007), and employment (Carnevale, Strohl, Gulish, Van Der Werf, & Campbell, 2019) have all led to compounded disadvantages for these groups over time (Pager & Shepherd, 2008). As a result, families with low incomes are disproportionately made up of racial or ethnic minorities: 32 percent of Black children and 25 percent of Latinx children are living below the poverty line, triple and over double the 10 and 9 percent poverty rates for both white and Asian children, respectively (Hussar et al., 2020). Thus, the barriers and structural disadvantages for lower-income students described above also disproportionately affect racial minority students.

While the aforementioned systemic issues permeate the entire education system, there are additional barriers unique to postsecondary access and success. The complexity of the college application process creates advantages for students whose schools and families have connections, social capital, and experience navigating the process (Ceja, 2006; Coleman, 1988; Dyce, Albold, & Long, 2013; Kim & Schneider, 2005; Pérez & McDonough, 2008; Perna & Titus, 2005). Additionally, though the returns to a postsecondary degree remain high, the immediate cost of attending college can be a major barrier for students from low-income backgrounds, particularly given the challenges of navigating the confusing mix of federal, state, institutional, and private financial aid options leave many students unable to afford college (Partnership for College Completion, 2019).

Once in college, white students and students from middle- and upper-class families are more likely to feel a sense of belonging at postsecondary institutions, where the majority of students typically have similar backgrounds to them. This sense of belonging, in turn, increases the likelihood that these students will persist through college to graduation relative to students from other backgrounds (Banks & Dohy, 2019; Schmader, Johns, & Forbes, 2008; Steele & Aronson, 1995; Walton & Brady, 2017). In addition, students from low-income backgrounds who do make it to campus are less likely than their higher-income peers to access or be aware of existing support services, such as tutoring and office hours (Engle & Tinto, 2008), and they are more likely to confront a wide array of financial challenges, including paying for tuition, books, or living expenses (Goldrick-Rab, 2016).

The OneGoal Model

OneGoal is a three-year program designed to address many of the common barriers to postsecondary access and success, currently serving over 13,000 students in six regions across the country. OneGoal targets schools which have large populations of students from low-income households who face a number of barriers to college admission and graduation. It is important to note that while the majority of cohorts included in this study experienced the OneGoal model as described in the following paragraphs, beginning in the 2018-2019 school year, students from the Class of 2020 and beyond have benefited from further enhancements to the OneGoal model. These enhancements (informed by external literature reviews as well as internal research including an extensive curriculum audit) include an expanded definition of postsecondary pathways, personalized visions for success and a focus on culturally relevant pedagogy which elevates student voice and choice, identity exploration, and socio-political

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consciousness. Program enhancements have been noted where relevant in the following paragraphs.

CORE INTERVENTION COMPONENTS

OneGoal cohorts are comprised of 25-30 students (“Fellows”) who desire to pursue a postsecondary degree but need support to maximize their chances of success. Principals, OneGoal instructors, and other school-based staff identify students they think will most benefit from the program, prioritizing students with a GPA between 2.0 and 3.0 and students who will be the first in their family to attend college. Without support, these students are at higher risk of not enrolling in college and not graduating if they do enroll, compared to their higher-performing peers (Holzer & Baum, 2017). However, a growing evidence base suggests that comprehensive supports can be particularly beneficial for students on the lower to middle range of academic readiness for college (Page et al., 2019; Scrivener et al., 2015; Barr & Castleman, 2017; Avery, 2013; Castleman & Goodman, 2018).

Each cohort of OneGoal Fellows spends one class period a day together for two academic years (11th and 12th grades) focused on preparing for college. During the third year of the program, which directly follows high school graduation, students continue to receive support from their OneGoal teacher. This cohort model is intended to generate camaraderie and feelings of peer support, as students know they are not alone in navigating the college transition. A key differentiator of the OneGoal program is the central place that teachers play in implementing the model. OneGoal works with principals to identify Program Directors (PDs) — high-performing instructors already teaching in the school, who are best positioned to build and deepen relationships with students, secure resources, and rally support within the school community as they coach their Fellows. With Principal approval, PDs are released from one of their classes for a minimum of two years to support their OneGoal Fellows.

Program implementation led by these certified classroom teachers also facilitates another key program feature: the curriculum is delivered during a credit-bearing course as part of the regular school day in the junior and senior years of high school. This model is aligned with growing evidence that college success supports are most effective if they are mandatory or difficult to avoid (Holzer & Baum, 2017). OneGoal Program Directors (PDs) stay in regular contact with students for over one year after high school graduation, leveraging the relationships built during the first two years of the program to provide personalized supports during the transition to college. Past research shows that one-to-one engagement with a trusted adult who can provide individualized advising can improve student outcomes (Bettinger & Baker, 2014; Barr & Castleman, 2017). An important recent shift has been to focus more intentionally on meeting Fellows where they are, whether that be in classrooms, remote at home and/or on their phones. OneGoal’s evolution to a more student-driven model now leverages an online learning platform alongside the teacher-led classroom, and a mix of diverse activities to guide Fellows to reach social-emotional, academic, and personal milestones that are critical to postsecondary success.

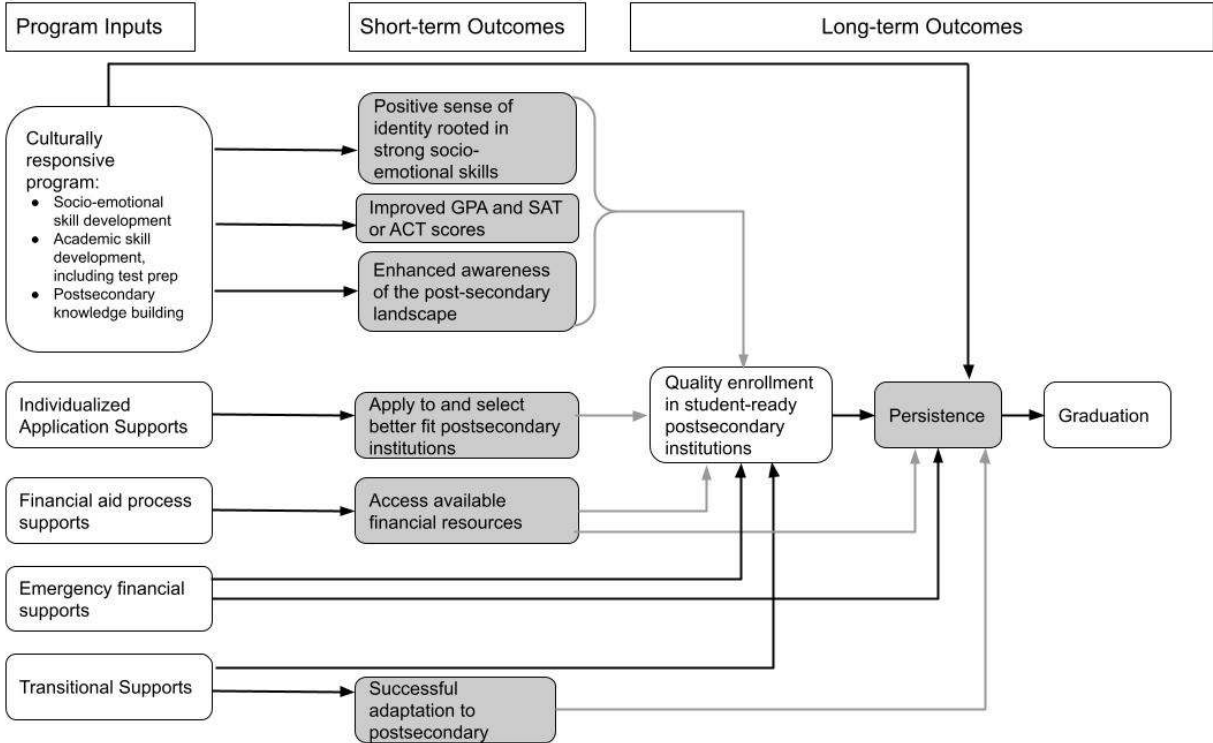
ONEGOAL’S LEVERS OF CHANGE

Figure 1 shows a visual representation of how each of the OneGoal program inputs is intended to impact each of the barriers described above, with the expectation that this model will affect the graduation rate by helping students enroll and persist in academic match colleges. The research base underlying each of the program inputs is described below. An updated version of

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these program inputs as the OneGoal model has evolved over the last few years has also been provided as Figure 1.

Figure 1. Visual representation of OneGoal’s program inputs and outcomes



Academic skill development

High school grades remain the most significant predictor of student success in college (Oreopoulos & Petronijevic, 2019; Allensworth & Clark, 2020). This is because they demonstrate the cumulative result of behaviors and skills associated with academic readiness, including time-management, effort, and success across different classes with various levels of rigor and expectations, analogous to the academic expectations in a college environment (Allensworth & Clark, 2020). Building a foundation of academic and study skills to improve high school GPA is therefore a critical and effective intervention strategy. Beginning in the first year (students’ junior year of high school), OneGoal aims to improve students’ academic performance on coursework and on college entrance exams by developing their study skills and stressing the importance of maximizing GPA. This improved performance should expand the set of colleges where students are likely to be accepted to include more selective institutions that tend to have higher graduation rates and more intensive student supports (Bowen, Chingos, & McPherson, 2011). By being better prepared for the academic rigor of college, students with higher grade point averages also perform better academically, and are subsequently more likely to persist, in college (Stewart, Lim, & Kim, 2015; Allen, Robbins, Casillas, & Oh, 2008). As will be noted later in this section, the current OneGoal model situates these strong academic supports within a more holistic curricular framework that emphasizes community building, identity development and social-emotional learning.

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Socio-emotional skills

A growing body of research has found that socio-emotional skills are predictive of outcomes such as increased test scores and long-term success in educational attainment and economic mobility (Borghans, Meijers, & Ter Weel, 2008; Heckman & Kautz, 2012; Farrington, 2013). Research also suggests that adolescents who grow up in disadvantaged environments can experience positive long-term outcomes when they participate in interventions that target socio-emotional skills and offer mentoring and guidance (Kautz & Zanoni, 2014). More specifically, Duckworth, Peterson, Matthews, and Kelly (2007) find that perseverance is correlated with educational attainment including higher undergraduate grade point averages. Yeager & Dweck (2012) find that students can be encouraged to develop a growth mindset and learn the tools to overcome challenges, which can lead them to become better positioned to handle challenging school transitions. Research also suggests that high schools with a college-going culture (with explicit conversations and encouragement from counselors and teachers) help promote college enrollment (Núñez & Kim, 2013; Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011). More recent research shows that realistic expectations, growth mindset, and feelings of belonging are associated with better academic performance in high school and college (Oreopoulos & Petronijevic, 2019; Broda et al., 2018).

In line with this research, during a student's junior year, the OneGoal curriculum focuses on building social and emotional skills to help prepare students for college: by learning about inequalities in the college selection process and studying the challenges that low-income and first-generation college students face, Fellows develop a college-going mindset that includes realistic expectations of potential barriers. In addition, the program curriculum draws on evidence-based interventions designed to support a sense of social belonging in college (Walton & Cohen, 2007; Yeager et al., 2016). The social and emotional skills covered in the curriculum reinforce students' academic skills in high school and help students persist in the face of challenges in college. As the model has evolved, the junior year experience has increasingly focused on supporting Fellows to build community with their cohort, develop a positive sense of self and further clarify their postsecondary aspirations. This focus on supporting students to build strong socio-emotional skills and develop an asset-based understanding of their own identity and communities remains a strong thread of the OneGoal model throughout the subsequent two years of the program. These key aspects of OneGoal's program evolution were supported through organizational research into the root causes of Fellows persisting through their postsecondary pathways of choice.

Test preparation

Standardized test scores are weighed heavily in some college admissions criteria as a measure of college readiness and are therefore highly predictive of college enrollment (Allensworth & Clark, 2020). Research has demonstrated that formal preparation focused on test taking strategies (typically available to higher income students) can improve students' SAT scores and selective college enrollment (Buchmann, Condrón, & Roscigno, 2010). Retaking the SAT also results in higher SAT scores and increases the likelihood that a student enrolls in a four-year college (Goodman, Gurantz, & Smith, 2020). The OneGoal curriculum explicitly teaches the test-taking strategies commonly taught in more affluent schools and provides opportunities to take practice tests. PDs encourage students to take the SAT more than once to maximize their score, which should likewise help expand the range of available colleges.

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Individualized college application and selection supports

Several studies have demonstrated that structured support during the application process can increase college enrollment and selectivity (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2012; Barr & Castleman, 2017; Page & Gehlbach, 2017; Oreopoulos & Ford, 2019; Roderick, M., Coca, V. M., & Nagaoka, J., 2011; Sherwin, 2012; Avery, 2013; Sullivan, Castleman, & Bettinger, 2019). OneGoal's senior year focus on college application and selection supports ensures that students apply to and enroll in the schools where they are most likely to succeed. Students are encouraged to apply to at least seven schools that they identify based on their interests and academic profile, in line with research showing that students who applied to more match colleges (defined as enrolling in as selective a college as possible given a student's grade point average and test scores) tended to be accepted to more colleges in general and receive more financial aid (Smith, 2013; Hoxby & Turner, 2015). Time is set aside in class to work on applications and students are reminded about important deadlines. Later in the year, the PD helps students choose among their college options. This is especially consequential for students from low-income backgrounds who often have fewer opportunities to obtain guidance on college selection from their social networks (Holzer & Baum, 2017; Castleman & Goodman, 2018), since their choice of college influences their likelihood of graduating and subsequently their future wages (Bowen et al., 2011; Chetty et al., 2017). As noted above, central to the evolution of the OneGoal model has been a shift from an approach that emphasizes the importance of 2- or 4-year degrees for all students to a broader approach that understands that a variety of postsecondary pathways, from technical programs to highly selective institutions, are valid and appropriate depending on each student's individual aspirations and needs. In other words, OneGoal has shifted away from a narrow definition of college (2-year or 4-year degrees) to an expanded definition of completion inclusive of 2-year degrees, 4-year degrees, and rigorous certification programs, all of which can lead to the ultimate outcome of a family-sustaining wage.

Financial aid process supports

While the FAFSA application has been simplified in recent years with online filing, researchers find that the application is still too long and complex, disproportionately burdening lower-income students who need the most financial support (Dynarski & Wiederspan, 2012; Dynarski & Scott-Clayton, 2006). Several experimental studies have found that enrollment increases when students have more information about their eligibility for financial assistance (Dynarski, Libassi, Michelmore, & Owen, 2018; Marx & Turner, 2017). Support with the financial aid process helps ensure that Fellows are accessing all available resources so they can enroll, and remain enrolled, at their best fit school. A major program focus during the OneGoal Fellows' senior year is ensuring that they can access all available financial resources and that they understand the actual cost of a given school (as opposed to the sticker price). PDs work closely with students to complete the FAFSA, a practice which has been shown to increase college enrollment rates and financial aid receipt (Bettinger et al., 2012).

Emergency financial supports

A recent evaluation indicates that emergency financial assistance can be effective in increasing college completion when combined with the kind of case management support OneGoal PDs provide (Evans, Kearney, Perry, & Sullivan, 2019). OneGoal has reserved funds for emergency financial assistance available to third-year Fellows to help bridge gaps in tuition payments or other student-related expenses.

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Transitional supports

Recent research has found that supporting students in the transition between high school and college helps ensure that students show up on campus and access the resources they need to be successful (for example, providing counseling and encouragement over the summer prior to freshman year, providing information and resources for managing enrollment logistics like housing or insurance, and helping with course registration) (Castleman, Arnold, & Wartman, 2012; Castleman, Page, & Schooley, 2014; Page & Gehlbach, 2017). Further, coaching from a trusted mentor can help students adjust to life on campus and support persistence (Bettinger & Baker, 2014). In the third (final) year of the program, Program Directors and OneGoal staff regularly check in with Fellows, supporting them in successfully adapting to their postsecondary pathway. During this third year, Fellows also receive support to successfully enroll since not everyone seamlessly enrolls. Fellows are asked to complete milestones that help them connect with on-campus support systems and meet deadlines and requirements for course registration and financial aid. Specific attention is paid to addressing the barriers commonly associated with the summer melt, such as completing necessary financial aid forms, submitting health documentation, and helping students register and enroll in classes. In addition to completing milestones, Fellows and Program Directors engage in critical conversations around social belonging, time management, and anxiety/stress management.

PRIOR SUGGESTIVE EVIDENCE OF ONEGOAL EFFECTIVENESS

Previous analyses of the OneGoal model are promising. Kautz and Zanoni (2014) conducted a quasi-experimental study of OneGoal's model and found that the program had positive effects on several outcomes. Using CPS data, they compiled a sample of 2,347 high school students who participated in OneGoal programming and graduated high school in 2009 through 2015. Comparison students were drawn from a sample of over two hundred thousand non-participants. Drawing on a rich array of administrative data, the researchers matched Fellows with non-participants who resembled the Fellows on many observable characteristics including demographics, grade point average, and disciplinary infractions, among other variables. The study found that OneGoal students' college enrollment and persistence rates were 10-20 percentage points higher than students in the comparison group, and that OneGoal improved a number of short-term outcomes, including grades and test scores.

This study builds on this past quasi-experimental evidence of the effectiveness of the OneGoal program by including additional cohorts of students who joined the program more recently. In addition, enough time has now elapsed to examine the impact of the program on students' college degree attainment six years after high school graduation for OneGoal participants who graduated high school between 2011 and 2014.

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Methodology

This section explains the various methodologies that were used in examining the impact of OneGoal's programming on high school and college outcomes and include discussion of the questions used to guide the research, analyses conducted, data sources and linking of the data, overview of participants, and high school and college outcomes and analytic samples.

RESEARCH QUESTIONS

The Inclusive Economy Lab and OneGoal collaborated to examine the effectiveness of OneGoal programming on high school and college academic outcomes and in the process, developed the following questions to inform the analyses included in this report:

- What is the effect of the OneGoal program on students' high school academic outcomes?
- What is the effect of the OneGoal program on students' enrollment in a postsecondary institution?
- What is the effect of the OneGoal program on college persistence and graduation (within six years of expected high school graduation)?

QUASI-EXPERIMENTAL PROGRAM EVALUATION

The most rigorous way to estimate causal effects of a program is through a randomized controlled trial (RCT). To measure a program's impact, we need to understand what would have happened to each program participant if they had not joined the program. In an RCT, program participation is assigned randomly and is the sole determinant of who is in the treatment group (receiving the program) and in the control group (not receiving the program). Differences between the study participants are evenly distributed among the treatment and control groups given the random, unbiased assignment, so the groups are seen as equal in expectation at the start of the program. This allows any differences in outcomes between the two groups to be attributed to the program, controlling for impact of other factors. Conversely, RCTs are not always a feasible way to evaluate a program since they are typically time-intensive and can be costly to conduct with fidelity. There are also ethical considerations associated with RCTs, however, when conducted with equipoise and sensitivity can provide powerful evidence on program impacts.

A quasi-experimental evaluation (QEE) is designed to mimic experimental evaluations like RCTs by matching OneGoal participants with similar non-participants based on observable pre-treatment characteristics captured in the CPS administrative data.

PROPENSITY SCORE MATCHING (PSM)

The QEE method used for this analysis is a statistical technique called propensity score matching (PSM). A PSM is an effective approach to use for matching students under conditions in which randomization is not feasible. Apart from being a sound research method, it can be completed in a much shorter timeframe due to its use of retrospective data.

In PSM, a comparison group is determined via matching each treated individual to a non-treated individual, based upon shared characteristics. This match on observable characteristics may

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provide meaningful counterfactuals for the experience that the treated individual would have had without treatment. As such, a researcher can estimate the impact of an event using PSM. However, for this estimation to be accurate, we must assume that the characteristics we match upon are representative of unobserved variation in personal experience.

Using PSM, we identified a group of CPS students that were not a part of OneGoal who appeared as similar as possible to OneGoal Fellows based on a set of observable pre-treatment characteristics found in CPS' administrative datasets. Students were matched on demographic, academic, and geographic characteristics, as well as the following criteria:

- All students were matched within their same year and school, to account for nuances in school experience and school supports by year and by school.
- None of the students in the comparison group were served by any of the college access providers that we have data for, to avoid comparing OneGoal fellow with students who were receiving similar supports albeit from another provider.

This process allows any differences in outcomes between the groups to be attributed to OneGoal, controlling for impact of other factors. Following the match, we used linear regression models to compare the relevant outcomes for both groups and determine the effect of OneGoal programming.

In our analysis, treatment is defined as students who were OneGoal Fellows, and thus enrolled in OneGoal programming at some point in their high school career. Our control is a comparison group comprised of students that had no exposure to programming from our Chicago College Success partners,² including OneGoal. To compose the analytic sample, we matched OneGoal Fellows with CPS students who were similar on various observable characteristics from the pre-treatment period. Exact matching by school and year was also utilized, so OneGoal Fellows could only be matched with students from their respective schools during the same year.

Using the pre-treatment data, we created a propensity score for everyone in the sample. In this case, the propensity score quantified the likelihood for a student participating in the OneGoal program given baseline characteristics. The baseline characteristics used for matching were selected using the least absolute shrinkage and selection operator (LASSO) regularization, a technique for variable selection that enhances both prediction accuracy and model interpretation. The selected variables for the PSM are summarized in Table 1. We matched each treatment participant to a single comparison participant based off the scores and our conditions, where we saw exact matches within school and 10th grade school year. This matching occurred with replacement, meaning that participants in the comparison group could each be matched with multiple participants in the treatment group as long as conditions are met. This increases the chances of us producing a well-balanced analytical sample with the best possible matches and decreased the number of individuals that were unmatched from the treatment group.

²In addition to OneGoal, Chicago College Success partners include Enlace, Posse, and Chicago Scholars.

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Table 1. Variables used for propensity score matching

| Variable | OneGoal | Matched Comparison Group |
|---|----------|--------------------------|
| 10 th Grade School Year | --- | --- |
| School | --- | --- |
| 10 th Grade Attendance Rate | 92.9% | 92.7% |
| PLAN Score | 15.2 | 15.1 |
| PSAT Score | 846 | 843 |
| 10 th Grade Unweighted GPA | 2.69 | 2.64 |
| Race & Ethnicity: Black | 50.6% | 52.8% |
| Race & Ethnicity: Hispanic | 43.8% | 42.7% |
| Race & Ethnicity: White | 3.2% | 2.6% |
| Race & Ethnicity: Asian | 1.1% | 0.9% |
| Race & Ethnicity: Undefined in Data | 1.2% | 1.1% |
| English as a Second Language (ESL) Status | 6.2% | 7.7% |
| Student School Grade Repeater Status | 2.0% | 2.1% |
| Individualized Education Plan Status | 1.1% | 1.4% |
| Free and Reduced Lunch Status | 92.0% | 93.4% |
| School Type: Neighborhood | 45.9% | 45.9% |
| School Type: Selective Enrollment | 0.03% | 0.03% |
| School Type: Magnet | 3.6% | 3.6% |
| School Type: STEM | 9.9% | 9.9% |
| School Type: IB | 8.8% | 8.8% |
| School Type: Options | 0.13% | 0.13% |
| School Type: Turnaround | 5.4% | 5.4% |
| School Type: Now Closed | 0.31% | 0.31% |
| Neighborhood College Graduation Rate | 21.5% | 20.9% |
| Neighborhood Median Household Income | \$43,980 | \$43,165 |

Since the baseline covariates in PSM are expected to be balanced between treated and untreated groups, following the match, we checked balance on the observable characteristics to ensure that the participants in the treatment group were sufficiently like those in the comparison group along each covariate. Balance was met on all but one covariate, 10th grade unweighted GPA, which was slightly unbalanced with a standardized mean difference (adjusted) of 0.1028, and a variance threshold of 0.6292. This suggests a slight difference in the average GPA for treatment and control groups. Because 10th grade unweighted GPA was controlled for in the regression model used to assess program impact, we were comfortable with the slight imbalance.

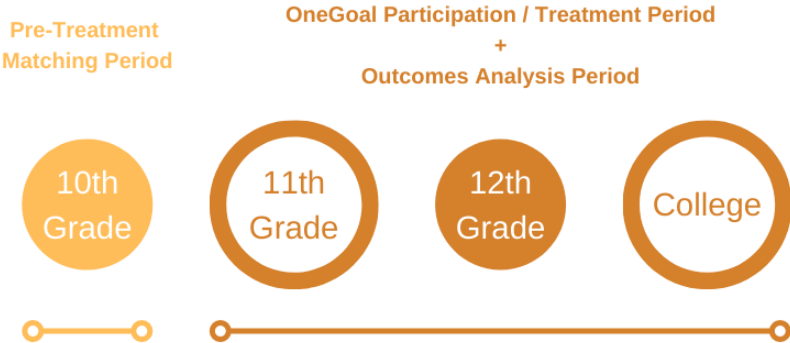
All covariates used for matching, as well as the unbalanced one, were controlled for in the linear regression, described below, during analysis to further extract the effect of OneGoal programming. Results from these balance tests can be found in greater detail in Appendix E.

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and demonstrate that we were able to identify a comparison group that closely resembled the OneGoal Fellows across all available observable pre-treatment characteristics.

Figure 2 illustrates the QEE process we used to determine program effects. OneGoal programming begins for students as juniors onward to college. We used 10th grade pre-treatment characteristics to match OneGoal Fellows to comparable students in CPS. Our high school and college outcomes are derived from these periods after Fellows have received OneGoal programming.

Figure 2. Primary analysis: Program participation periods and outcomes analyses



The primary analysis of the matched sample was conducted using a linear regression model with fixed effects at the high school level controlling for the variables used in the propensity score match from the year directly prior to each students’ junior year. We are only able to match students based on the available observable characteristics, such as demographics or pre-treatment academic data. As such, there is a possibility that effects could actually be driven by unobservable characteristics at baseline between OneGoal Fellows and comparison group students (Harding, 2003; Imbens, 2014; Athey & Imbens, 2017). For example, students with higher levels of motivation, an unobservable characteristic we have no access to, may be more inclined to enter into the OneGoal program. Conversely, highly motivated students who due to extenuating circumstances such as familial obligations that interfere with academic pursuits, also an unobservable characteristic that we have no access to, may be less inclined to enter into the OneGoal program. Given this limitation, we conducted a series of robustness and quality assurance checks in the form of a placebo test to assess the extent to which unobservable characteristics might account for differences in outcomes.

Even with placebo testing, we can’t rule out that unobservable differences between the groups may account for the differences in outcomes that we observe; however, it allows us to increase the confidence in our results and provide the best suggestive evidence of OneGoal programming despite the unavoidable limitations. The Inclusive Economy Lab is also separately partnering with OneGoal on a forthcoming RCT study that can provide even stronger causal evidence on the effect of the program.

PLACEBO TESTING

In econometrics and causal inference, placebo tests allow researchers to probe the soundness of a research design by checking for an association that should be present if the design is flawed but not otherwise (Eggers, Tuñón, & Dafoe, 2021). Placebo tests can take many forms, and we used a *pre-treatment placebo outcomes test* for our purposes. Pre-treatment placebo

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outcome tests use pre-treatment variables which both serve as a proxy³ for our actual outcomes and are susceptible to influence from confounding variables⁴. In our case, because these proxy variables are collected before students became OneGoal Fellows, we can determine that any difference between treatment and comparison groups is being driven by unobservable conditions. As such, the ideal result from this type of placebo test is finding no differences between students who would go on to participate in OneGoal and those who do not. If, on the other hand, the placebo tests detect significant differences, this suggests there is an unobservable factor having a significant effect on outcomes we are unable to control for. In a matching study like ours, significant placebo findings prevent us from conclusively estimating program effect size, but insignificant placebo findings give us greater confidence in the results. In the next section we detail the approach used to construct our placebo group.

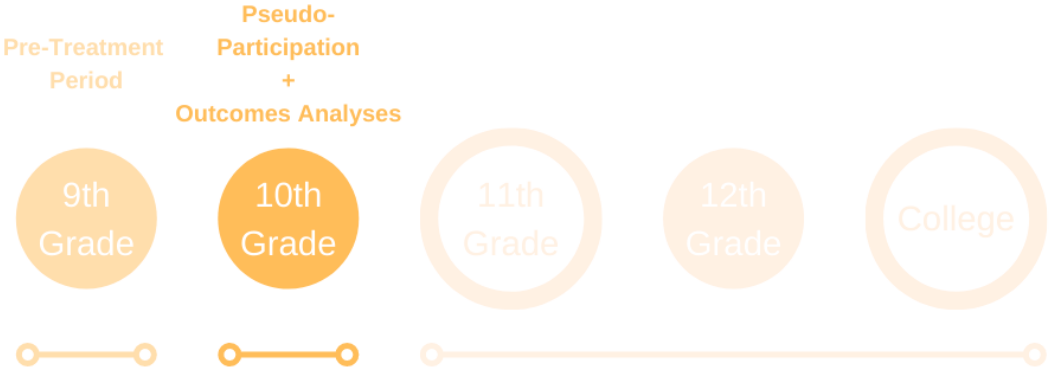
Placebo Test Group Construction

For our placebo test group, we matched OneGoal Fellows and comparison students on ninth grade academic outcomes and demographics. Students apply to or are nominated to participate in OneGoal at the end of their 10th grade year and become Fellows during their junior year. By using academic data from before that period, we can avoid the influence that OneGoal programming has on outcomes and isolate effects caused by unobservable variables. We then compare the effects sizes and significance of this analysis to that of our primary analysis to provide a more nuanced understanding of OneGoal’s impact.

Figure 3 illustrates the process described above. We see that for the placebo test, we re-match students using only pre-treatment data from ninth grade.

We then observe the relevant effects for this group. If, after going through the placebo test, there are significant differences between both groups, it’s likely that there are some other factors influencing the student outcomes that we could not account for. In this case, we would be unable to decisively attribute program effect sizes to OneGoal programming.

Figure 3. Placebo testing: Program participation periods and outcomes analyses



³ A proxy or proxy variable is used in place of an unobservable variable and has a close correlation with the variable of interest.

⁴ A confounding variable is an unmeasured variable not accounted for in an experiment and acts as an external influence, impacting both the supposed cause and the supposed treatment effect.

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DATA SOURCES AND LINKAGE

The Inclusive Economy Lab used several data sets to look at OneGoal’s effect on the following high school and college outcomes: High school standardized test scores, high school senior year GPA, high school graduation, number of submitted college applications, direct college enrollment, whether a student met or exceeded college match, year-to-year college persistence, and college graduation. In order to compare OneGoal Fellows to similar students who didn’t participate in OneGoal programming, outcome data presented in this report were drawn from several data sources: OneGoal data on program participation, non-public CPS administrative data, Naviance data⁵, and data from the National Student Clearinghouse (NSC)⁶. We briefly describe each data source and linkage process below.

OneGoal provided the Inclusive Economy Lab with participant data for 7,733 OneGoal Fellows who were expected to graduate high school between the years of 2009 and 2020. Participant data for OneGoal Fellows included participant names, birth dates, high schools, and high school graduation years. This dataset is linked to available administrative data from CPS through the CPS student IDs.

Through a data sharing agreement between the Inclusive Economy Lab and CPS, researchers have access to CPS student data, including but not limited to student IDs, GPAs, test scores, and whether a student graduated. The CPS data were used to understand the characteristics of OneGoal participants when they entered the program as well as to track their outcomes after program entry. CPS keeps data from all active and inactive students who were ever enrolled in CPS schools since the 2008-09 school year. Using this dataset, researchers were able to identify and confirm whether Fellows were ever enrolled in CPS at the time they were identified to participate in OneGoal. The research team then used these data to determine the unweighted GPA for each student upon time of application to OneGoal, which was the end of fall of their sophomore year, as well as Junior year ACT and SAT scores, 12th grade unweighted GPA, and high school graduation. Senior year of high school attendance rates were calculated by taking the ratio between the number of days a student attended school their senior year and the number of days in that school year. Ninth grade GPA, attendance rates, and scores from the EXPLORE standardized test were also used for pre-participation placebo testing, as this was the available data, we had prior to any interaction with OneGoal, for our treatment and comparison group alike. Ideally, we would observe no significant differences between the groups which tells us that, after controlling for other relevant covariates, it is unlikely we have a confounding variable driving differences between the groups apart from the program effects. Additionally, through the data sharing agreement, researchers were also able to access data from Naviance and NSC to determine the college outcomes of interest to the analysis.

The research team used the participant data received from OneGoal and linked records across CPS data sets using a probabilistic linking algorithm. The research team favored a conservative approach to linking, meaning the team only kept links that had over a ninety percent probability of being a correct match. For Fellows who were linked to more than one observation, the team

⁵ Naviance collects data from high schools on students’ decisions about where to enroll in college, college application efforts, and college acceptance, allowing us to track outcomes for the number of college applications a student submitted.

⁶ The NSC collects data from postsecondary institutions around the country on students’ enrollment and degree attainment and provides the most comprehensive information on where students enroll and ultimately graduate from, allowing us to track outcomes for direct college enrollment, whether a student met or exceeded college match, year-to-year college persistence, and college graduation outcomes.

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selected the CPS record that had the most recent exit date. The research team successfully linked 7,513 Fellows to CPS student IDs, representing about 97 percent of OneGoal Fellows in the original dataset. Following the linkage of OneGoal participant data to CPS data, the Inclusive Economy Lab matched the available OneGoal sample to a comparable sample of students using PSM, representing about 91% of OneGoal Fellows in the original dataset. An overview of the linkage results is shown in Table 2.

Table 2. Linkage between OneGoal and CPS data

| Link Condition | Total Fellows | Percentage of Fellows |
|--|---------------|-----------------------|
| All OneGoal Fellows Pre-Link (High School Class of 2009 to 2020) | 7733 | 100% |
| Linked to CPS Data (Public and other district) | 7513 | 97.2% |
| Included in the propensity score analysis | 7065 | 91.4% |

OVERVIEW OF PARTICIPANTS

7,065 OneGoal Fellows were successfully matched and included in the analysis. Because of sample constraints resulting from insufficient information for the purposes of matching, this matching analysis excludes the first two cohorts who were expected to graduate from high school in 2009 or 2010. To analyze the effect of OneGoal programming on high school outcomes, we used the full participant sample of 7,065 CPS students that became OneGoal Fellows their junior year, and 7,065 matched non-Fellow CPS students. These cohorts were composed of CPS students who were expected to graduate high school between 2011 and 2020, giving us the ability to look at outcomes for over a decade of scholars. To be included in this analysis, Fellows must have been identified and participated in a OneGoal cohort and non-Fellows must have been matched in based on pre-treatment characteristics. To analyze the effect of OneGoal programming on college outcomes, we restricted the sample to cohorts that theoretically would have had the time to meet the relevant college milestones in our analysis.

HIGH SCHOOL AND COLLEGE OUTCOMES

We analyzed the effects of OneGoal programming on unweighted high school GPA, attendance rate, high school graduation, and number of submitted college applications by senior year. We also examined the impact of OneGoal programming on standardized testing, like the ACT and SAT, which students first took their junior year.

We also analyzed the effects of OneGoal programming on reaching various college milestones. We specifically looked at whether a student directly enrolled into college within half a year from graduating high school, whether students enrolled in a match institution (based on both OneGoal⁷ and CPS definitions⁸), whether students persisted year-to-year for two years after college enrollment, and whether students were able to graduate within six years of enrolling into college. The college graduation outcome utilized the smallest subset of the data (n=2232) because we could only analyze this milestone using data from students who could have spent at least 6 years in college.

⁷ Appendix C: OneGoal Selectivity Guidelines


⁸ Appendix D: CPS Selectivity Guidelines

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It should be noted that some student data was not available across cohorts, and we don't observe all outcomes for all linked students, despite their IDs being found in the database. Among high school outcomes, 12th grade attendance rate and unweighted GPA were observed across all cohorts. For student data that was not available across cohorts, we observe the remaining high school outcomes for the following cohorts: 2011–2017 for Junior year ACT scores, 2018–2020 for Junior year SAT scores, and 2011–2019 for high school graduation. Additionally, we observe college outcomes for the following cohorts: 2016–2020 for submitted college applications, 2011–2019 for direct college enrollment, 2011–2019 for whether a student enrolled in an academic match institution for both OneGoal and CPS selectivity guidelines, 2011–2018 for year-to-year persistence, and 2011–2014 for college graduation. Missing data was imputed using the sample's median and given a flag to indicate imputation which was also used in the regression to model outcomes. Table 3 summarizes the available data on high school and college outcomes across cohorts.

Table 3. Available data on academic outcomes varied by cohort

| Outcome | OneGoal Cohort (By Expected HS Grad Year) | | | | | | | | | |
|---|---|------|------|------|------|------|------|------|------|------|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Junior Year ACT Scores | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | |
| Junior Year SAT Scores | | | | | | | | ■ | ■ | ■ |
| Attendance Rate (12th Grade) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Unweighted GPA (12th Grade) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Submitted College Apps | | | | | | ■ | ■ | ■ | ■ | ■ |
| High School Graduation | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Direct College Enrollment | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Enrollment in Match Institution (CPS Selectivity) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Enrollment in Match Institution (OneGoal Selectivity) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Year-to-Year Persistence | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Graduate Bachelors or Associates (within 6 years of HS graduation) | ■ | ■ | ■ | ■ | | | | | | |


 ■ Data available for this cohort

KEY FINDINGS

Key Findings

SUMMARY OF FINDINGS

We find OneGoal leads to significant, positive improvements on nearly all academic outcomes of interest. These findings are very encouraging, and in particular, show impressively strong effect sizes for the outcomes that revealed OneGoal students enroll in, persist, and graduate from college at statistically significantly higher rates relative to similar students who didn't participate in the program. The significant findings from our study are summarized in Table 4.

Table 4. Summary of statistically significant findings

| Significant at $p < 0.001^2$ | Estimated OneGoal Effect |
|--|--------------------------|
| Attendance Rate (Senior Year) | +2.7 percentage points |
| Unweighted GPA (Senior Year) | +0.04 grade points |
| High School Graduation | +15.9 percentage points |
| Number of Unique Submitted College Applications | +1.6 unique applications |
| Percent Directly Enrolled into College (Within Six Months from High School Graduation) | +20.4 percentage points |
| Enrollment in Match Institution (OneGoal Guidelines) | +7.7 percentage points |
| Enrollment in Match Institution (CPS Guidelines) | +7.2 percentage points |
| Year-to-Year Persistence | +15.8 percentage points |
| College Graduation (Within Six Years) | +8.2 percentage points |

Of all outcomes of interest, only ACT and SAT results do not show significantly positive effects. Smaller p values indicate higher levels of statistical significance, though industry standard states any p value below .05 is significant

PROGRAM EFFECTS ON HIGH SCHOOL OUTCOMES

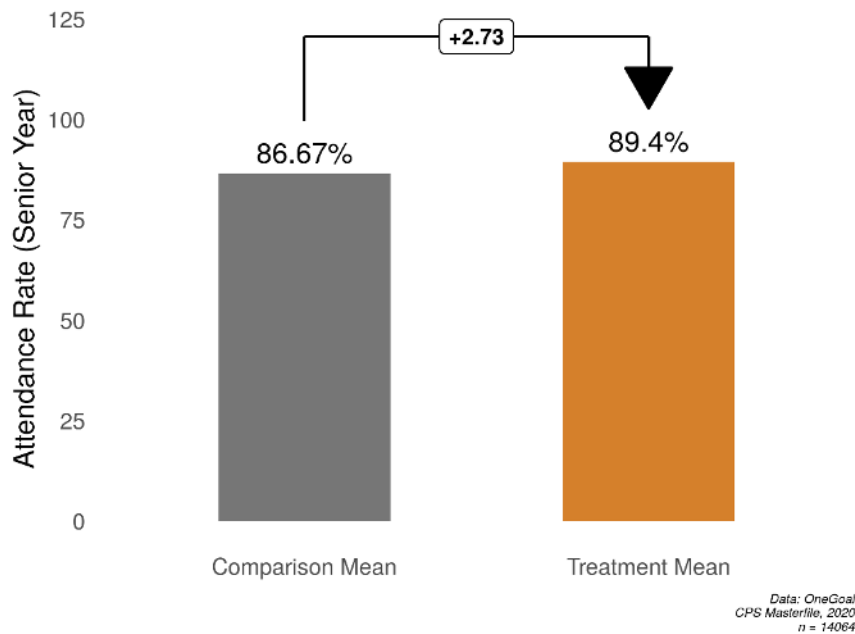
OneGoal increases Fellows' senior year attendance rate by an estimated 2.7 percentage points on average.

School attendance can be a powerful predictor of a student's academic achievement. As such, we examined whether participating in OneGoal impacted the number of school days attended during a student's senior year. We found that, on average, students who received OneGoal programming showed an increase in their attendance rate by 2.7 percentage points over non-participants. Attendance rate was calculated based on the number of days a student went to school over the number of days they could have been in school. If a student transferred, or their school has a slightly different schedule, the denominators may not be the same across students. However, using the standard CPS number of days of instruction per year, which, on average is 176 days,⁹ would mean that OneGoal Fellows attended school 4.8 days more than comparison group students. Figure 4 shows a comparison of average senior year attendance rates for OneGoal Fellows and their matched counterparts. This result was significant at the 0.001 level, meaning that it is unlikely that the difference between the two groups is a result of chance.

⁹ Based on available district data of the total number of days in which schools provided at least 5 hours of instruction during the school years of 2017 – 2021, 2.7 percentage points would be equivalent to 4.8 days

KEY FINDINGS

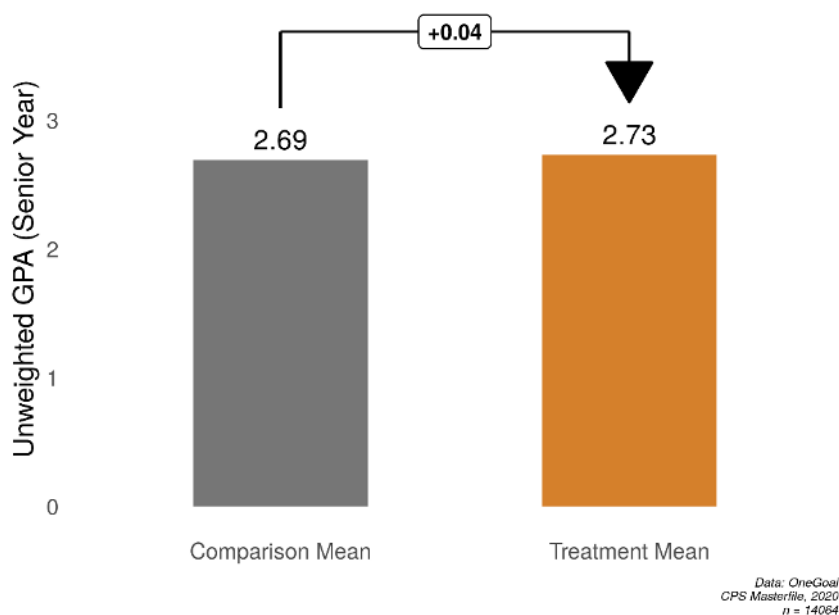
Figure 4. Average attendance rates (Cohorts 2011 - 2020)



OneGoal increases Fellows' senior year GPA by an estimated 0.04 points on average.

Given the importance of GPA on high school and college outcomes, we also examined whether participating in OneGoal programming affected the senior year unweighted GPA for Fellows. Unweighted senior year GPA in high school has a maximum value of 4.0 in CPS. Following our analysis, we found that the average treatment effect for OneGoal Fellows was an increase in senior year GPA by 0.04 grade points. This result was significant at the 0.001 level. These findings are summarized in Figure 5.

Figure 5. Average senior year unweighted GPA (Cohorts 2011 - 2020)

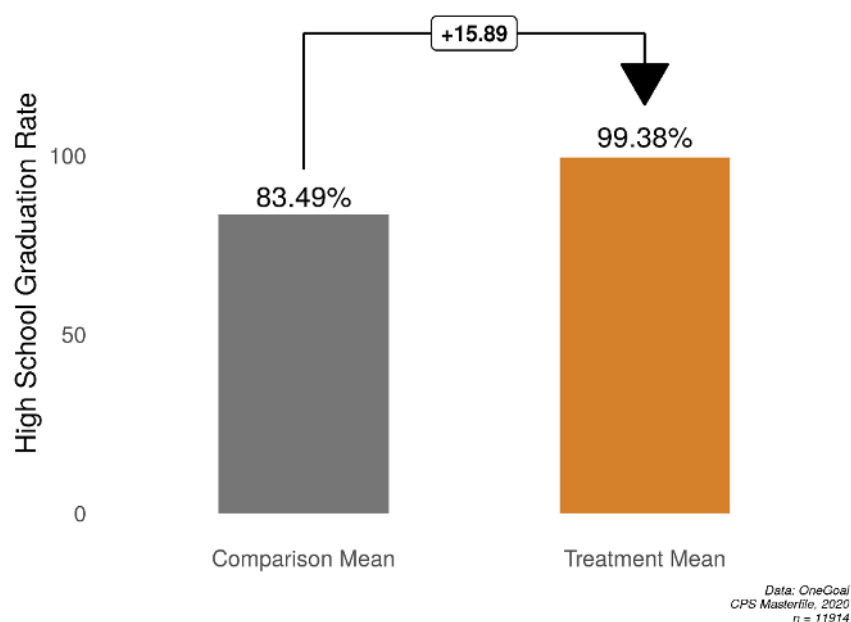


KEY FINDINGS

OneGoal increases Fellows' high school graduation rate by an estimated 15.9 percentage points on average

An analysis of the effect of OneGoal participation on high school graduation rates showed that among OneGoal Fellows, the chances of graduating high school increased by 15.9 percentage points, with 99.38% of OneGoal Fellows graduating high school as compared to 83.49% of their comparison group peers. High school graduation rates were determined using CPS administrative data that confirmed a given student's graduation. Figure 6 illustrates the OneGoal program effect on high school graduation rates. This result was significant at the 0.001 level.

Figure 6. Average HS graduation rates (Cohorts 2011 - 2019)

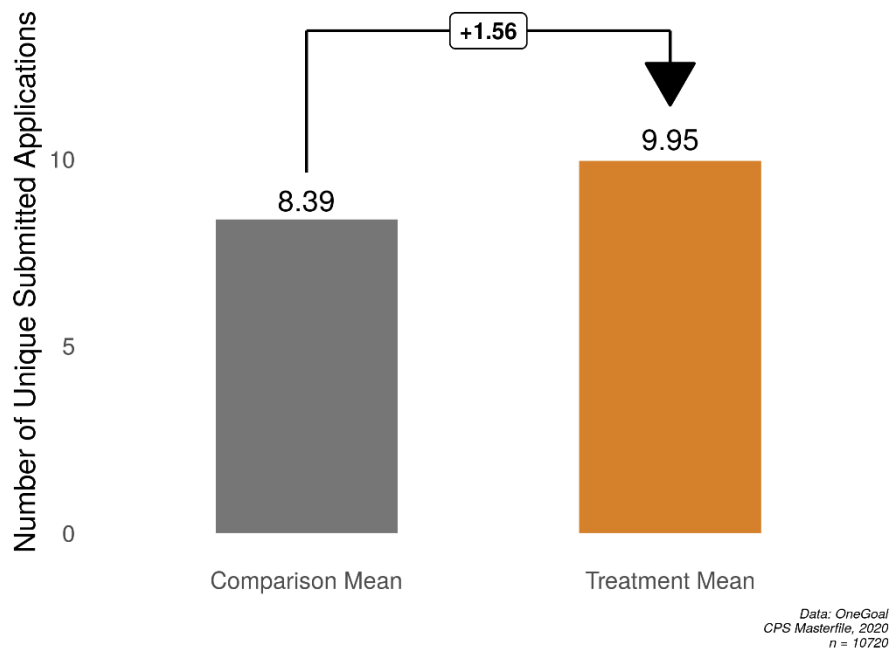


OneGoal Fellows submit 1.6 more college applications than comparison students on average

In our analysis of the number of submitted college applications, we found that OneGoal Fellows submitted 1.6 more applications than comparison group students who did not receive OneGoal programming, with Fellows submitting an average of 9.95 college applications compared to an average of 8.39 applications submitted by the comparison group. The number of submitted college applications was determined by taking the number of applications submitted to unique institutions by a student's Senior year. Multiple applications to the same institution were only counted once and we focused on how many schools to which each individual student applied. This result was significant at the 0.001 level and the findings are summarized in Figure 7.

KEY FINDINGS

Figure 7. Average number of unique college applications submitted (Cohorts 2016 – 2020)

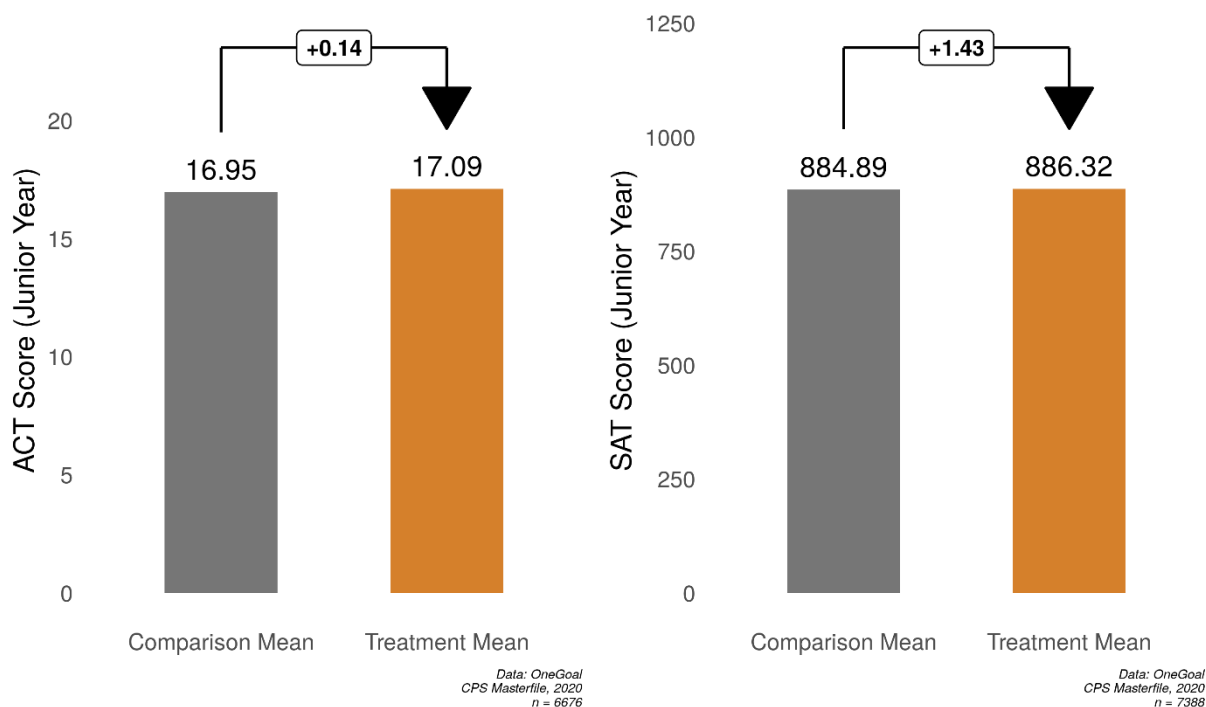


OneGoal does not significantly improve ACT or SAT scores

When analyzing the impact of OneGoal programming on high school outcomes, we also examined standardized test scores for Fellows and non-Fellows. In particular, we focused on examining both ACT and SAT test scores, as both were mandatory exams in CPS at different points in time. ACT scores were available for all students who were Juniors at or before 2015. SAT scores were available for all students who were Juniors from between 2016 to 2020. We restricted the analytic sample to each respective time period when conducting the regression analysis. We did not find significant results for the effect of OneGoal programming on ACT scores (p-value = 0.075), or SAT scores (p-value = 0.564). Both analyses revealed p-values above the 0.05 threshold for determining whether an outcome is statistically significant, which signifies that no treatment effect was observed. Figure 8 summarizes these findings.

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Figure 8. Average ACT (Cohorts 2011 - 2017) & SAT (Cohorts 2018 - 2020) scores



Variable notes: Junior year ACT scores were available for all students who were juniors at or before SY2016. Junior year SAT scores were available for all students who were juniors from SY2017 through SY2019.

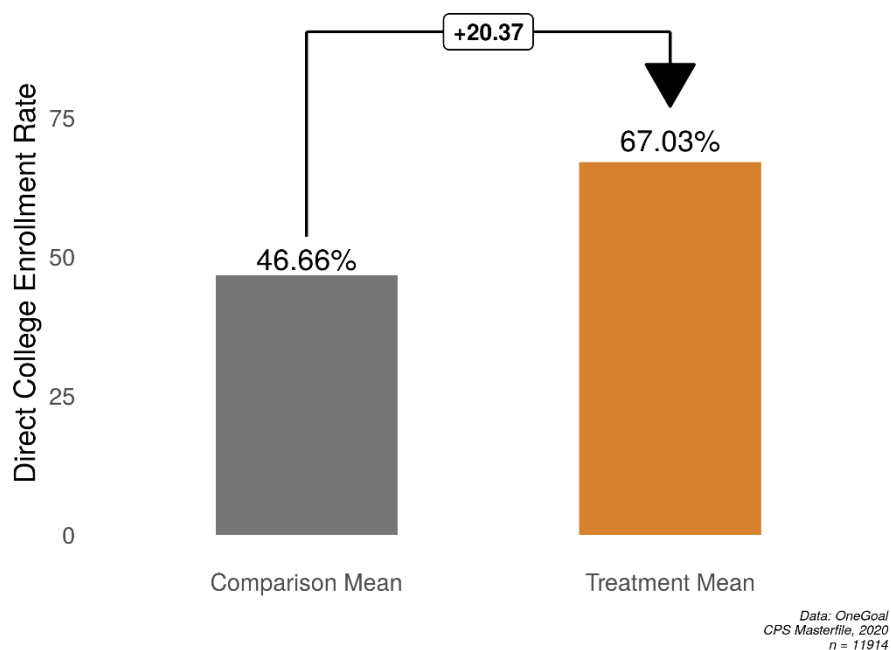
PROGRAM EFFECTS ON COLLEGE OUTCOMES

OneGoal increases Fellows' direct college enrollment rate by an estimated 20.4 percentage points on average

For CPS graduates, the likelihood of completing a college degree or certificate increases significantly when students immediately enroll in college compared to those who do not immediately enroll (Malone, Mahaffie, Hernandez, Usher & Nagaoka, 2021). In our analysis of program participation on direct college enrollment rates, we observed that OneGoal Fellows were 20.4% more likely to be enrolled at a 2- or 4-year college than their non-OneGoal Fellow peers, with average college enrollment rates of 67.03% for OneGoal Fellows and 46.66% for their comparison group peers. Direct college enrollment was defined as a student enrolling into either a 2-year or 4-year college within the first 6 months after graduating high school. This result was significant at the 0.001 level and is summarized in Figure 9.

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Figure 9. Average college enrollment rate (Cohorts 2011 - 2019)



Term periods are defined dynamically in 6-month intervals relative to students' high school graduation date. This definition captures the June-December period for ~97% of students and is therefore analogous to Fall semester enrollment. However, students who graduate later than June are captured in this definition if they enroll in college within 6 months of HS graduation, even if this is later than Fall semester. This is not expected to meaningfully influence the estimated OneGoal effect on direct enrollment.

OneGoal increases Fellows' rate of enrollment at a match institution by an estimated 7.7 and 7.2 percentage points on average with OneGoal and CPS guidelines respectively

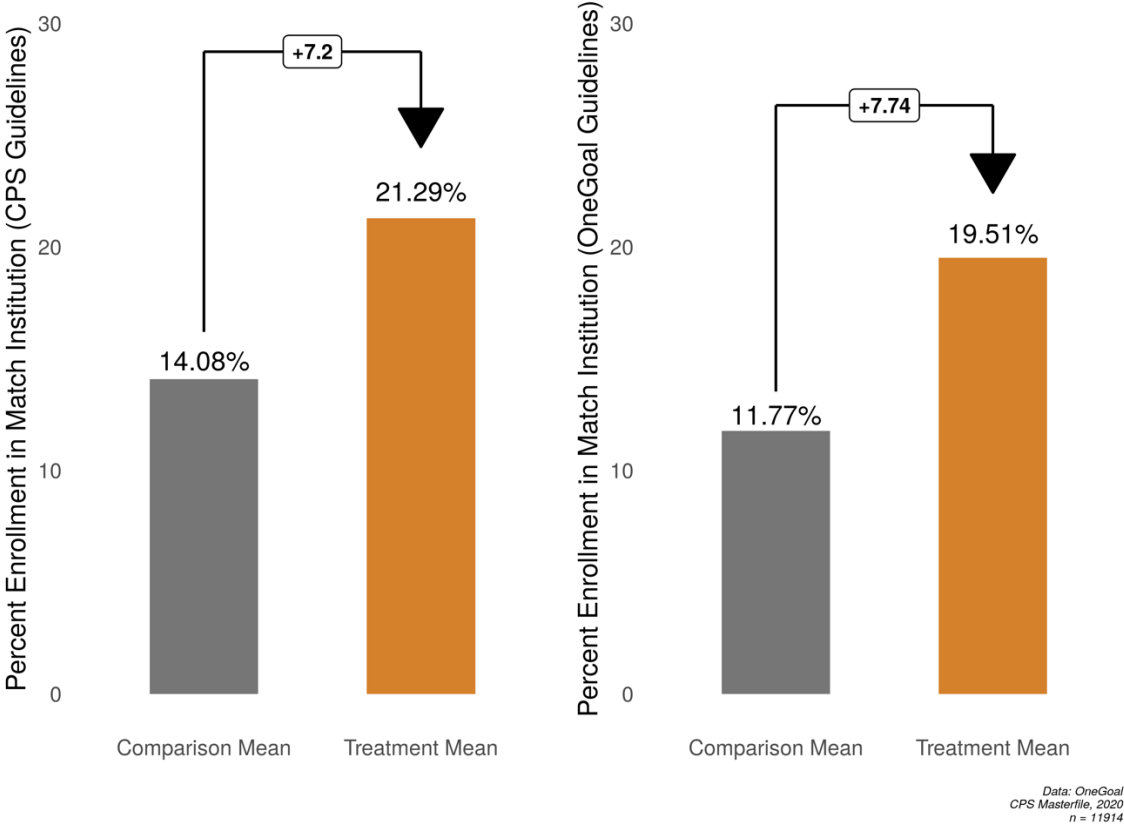
In addition to examining OneGoal Fellows' and non-Fellows' direct college enrollment, we also examined the level of academic match among the institutions in which students from both groups enrolled in. An academic match between a student and an institution occurs when a student's selectivity level meets or exceeds the selectivity rating of an institution. Student selectivity levels are determined using a combination of standardized test scores and GPA, with both OneGoal and CPS having slightly different guidelines for the selectivity level thresholds. Academic institutions are assigned a selectivity rating by the Barron's Selectivity Index (College Division of Barron's Education Series, 2006),¹⁰ with higher ratings also carrying a higher level of prestige. A student's selectivity level suggests the category of schools which may be a proper match for the student. To investigate the effects of OneGoal programming on a student's likelihood to enroll in a match institution, we identified students who matched with an institution whose rating met or exceeded the level of the student. We did not impose any restrictions based on time-from-graduation and instead focused on the first institution a student matriculated into regardless of time.

¹⁰ Barron's Selectivity Index is used by CPS to identify a student's general college match level and potential colleges of interest.

KEY FINDINGS

Using the OneGoal guidelines, OneGoal Fellows saw a 7.7 percentage point increase in their likelihood of going to an institution that met or exceeded their selectivity level over the comparison group of non-OneGoal Fellows. Of OneGoal Fellows, students met or exceeded college match at an average of 19.51% compared to 11.77% of non-OneGoal Fellows. This result was significant at the 0.001 level and is unlikely to be due to chance. Using CPS guidelines, we found similar effects. On average, OneGoal Fellows saw a 7.2 percentage point increase in their likelihood of going to an institution that met or exceeded their selectivity level over non-OneGoal Fellows, with average rates of 21.29% and 14.08%, respectively. The result using CPS guidelines was also significant at the 0.001 level. Both results are summarized in Figure 10.

Figure 10. Average rate of students who met or exceeded “college match” (Cohorts 2011-2019)



CPS and OneGoal each use HS GPA and standardized test scores to determine how selective of a college would be considered a “match” for that student using slightly differing definitions. We track rate of match at the first college where a student enrolls after high school graduation, not restricted by a time limit after HS graduation.

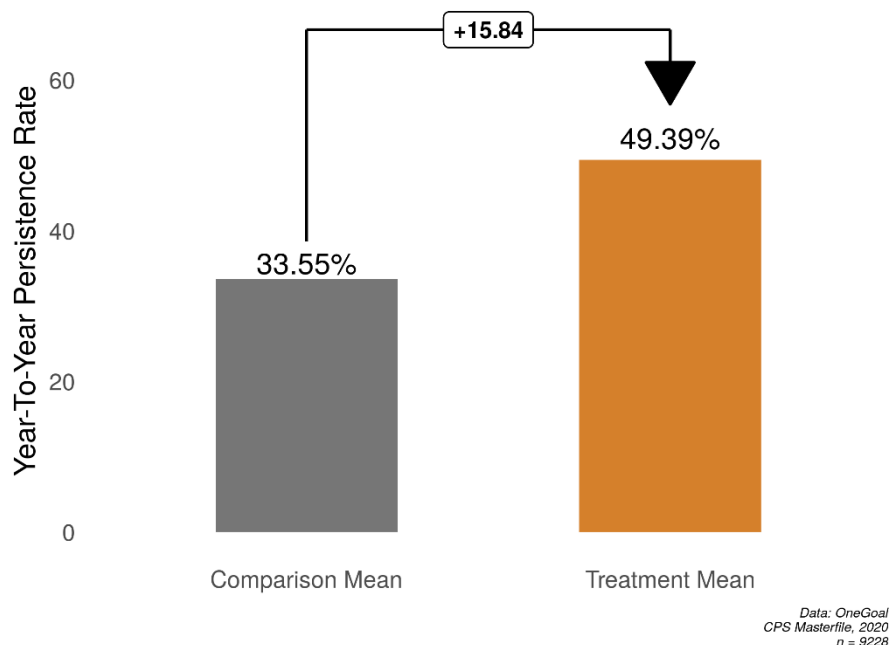
OneGoal increases Fellows’ year-to-year persistence rate by an estimated 15.8 percentage points on average

For students who enroll in college, remaining enrolled can still pose a challenge, however, research shows that students who remain continuously enrolled through the first two years of college are more likely to complete a degree or credential (Malone, Mahaffie, Hernandez, Usher & Nagaoka, 2021). As such, we wanted to examine the impact of OneGoal programming on

KEY FINDINGS

college persistence rates for OneGoal Fellows and non-fellow CPS students. Year-to-year persistence is defined as students who directly enroll in a 2-year or 4-year college within 6 months of graduating high school and who are still enrolled in a 2-year or 4-year college at any point during the following academic year. Figure 11 showcases the results of our analysis. We found that on average OneGoal Fellows were 15.8 percentage points more likely to persist in college than their non-fellow peers, with 49.39% of OneGoal Fellows persisting compared to 33.55% of their non-fellow peers. This result was significant at the 0.001 level.

Figure 11. Average college persistence rates (Cohorts 2011 - 2018)



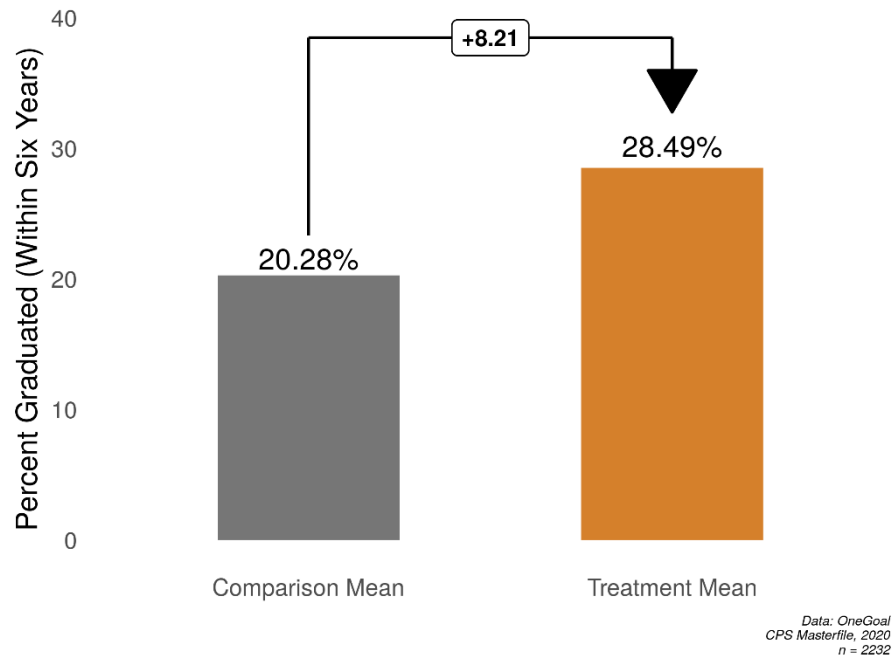
Term periods are defined dynamically in 6-month intervals relative to students' high school graduation date. A small portion of students captured in this definition graduated high school late may be captured as persisters if they were enrolled by early junior year. This is not expected to influence the estimated OneGoal effect on persistence.

OneGoal increases Fellows' 6-year college graduation rate by an estimated 8.2 percentage points on average

In our final analysis of the effects of OneGoal programming on college outcomes, we examined college graduation rates between the treatment and comparison groups. College graduation was defined as a student obtaining either an associate's or bachelor's degree within six years of graduating from high school. We focused specifically on 2- and 4-year institutions and graduating from institutions that do not fit under either category are not captured in this analysis. OneGoal Fellows saw an average treatment effect of 28.49%, while non-OneGoal Fellows saw an average treatment effect of 20.28%, meaning that students who received OneGoal programming increased their chances of earning either an associate or bachelor's degree by 8.2% over students from similar backgrounds. This result was significant at the 0.001 level and summarized in Figure 12.

KEY FINDINGS

Figure 12. Average college graduation rates (Cohorts 2011 - 2014)



DISCUSSION AND NEXT STEPS

Discussion

Research tells us that the most effective route out of poverty is education. In Chicago, youth from low-income backgrounds have shown immense potential but unfortunately face significant barriers in their postsecondary journey, including access to a high-quality high school education with a strong college-bound culture, guidance in navigating complex college admissions and financial aid processes, and a dearth of additional supports and resources necessary to help them persist in and graduate from college.

Programs like OneGoal serve an important role in lessening the impact of historical and structural barriers that prevent students from achieving educational attainment. The vast majority of OneGoal Fellows are from disadvantaged Black and Latinx communities in Chicago but are full of students and families who aspire for greater opportunities. These students lean on the resources of organizations like OneGoal to support them in navigating these precarious systems. In order to adequately serve their populations, OneGoal “[focuses] on three pivotal transitional years from high school through the first year of college, working in close partnership with districts, high schools, and postsecondary institutions.”¹¹ Through this approach, OneGoal trains educators to provide the curriculum, resources, and guidance students need to meet their postsecondary education aspirations. Just as importantly, OneGoal seeks to empower the Fellows they serve, restore a sense of agency, and build a sense of community among program participants.

To understand the impact of OneGoal’s program model, the Inclusive Economy Lab conducted a quasi-experimental program evaluation using a propensity score matching approach to answer the question, “What is the effect of OneGoal programming and supports on students’ high school and college academic outcomes?” Through our analyses, we find OneGoal programming has strong positive and statistically significant effects on nearly all outcomes of interest, which strongly suggests that participating in OneGoal programming improves student achievement across the following high school and college outcomes: senior year attendance rate, senior year unweighted GPA, high school graduation, number of submitted college applications, direct college enrollment, match institution enrollment (OneGoal definition), match institution enrollment (CPS definition), year-to-year persistence, and college graduation (within six-years).

The magnitude of these effects is particularly striking for our three primary outcomes of interest: direct college enrollment, year-to-year persistence, and college graduation within six years. OneGoal Fellows enrolled into college within half a year after high school graduation at a rate 20.4 percentage points higher than non-Fellows. This amounts to a 46 percent increase over the comparison group. When looking at year-to-year persistence, OneGoal Fellows persisted in college (at least two sequential years of enrollment) at a rate 15.8 percentage points higher than non-Fellows, a 47 percent increase over the comparison group. College completion can be a major challenge for Black or Latinx students from low-income families or who are first-generation college students. The college graduation outcome results align with the findings from previous research by revealing that OneGoal Fellows graduate from college within six years at a rate 8.2 percentage points higher than non-Fellows, a 40 percent increase over the comparison group. Putting that figure in context, an increase in college completion of 8.2 percentage points would reduce the overall gap in college completion between children growing up in households in the top income quartile and those in the bottom quartile by roughly 17 percent.

¹¹ <https://www.onegoalgraduation.org/about/problem-solution/>

DISCUSSION AND NEXT STEPS

This study contributes to a nascent but growing body of evidence suggesting that comprehensive programs that support students starting in high school through enrollment in college can substantially improve college outcomes for students from low-income households. For example, Page et al. (2019) examine the effectiveness of Dell Scholars, a comprehensive college access program that combines direct financial supports with individualized student advising, using regression discontinuity and difference in difference approaches. They find that the program increases the likelihood that students will graduate college within six years of their high school graduation by 9 to 13 percentage points. While the target population of the Dell Scholars program were higher performing academically than the students served by OneGoal, evidence from other comprehensive programs aimed at lower performing students have seen promising results (Scrivener et al., 2015; Sommo et al., 2018; Bertrand et al., 2019; Bettinger & Baker, 2014). Likewise, a randomized controlled trial of Bottom Line, a comprehensive support program spanning high school and college, found that it increased college enrollment by 7 percentage points and persistence to the second year by 8 percentage points, with larger effects among students with lower GPAs (Barr & Castleman, 2017). The promising results across these studies suggest that the kind of comprehensive services offered by programs like OneGoal's should play a role in ensuring that all students have the supports they need to overcome systemic barriers and make their goals of a college degree a reality.

NEXT STEPS

The findings presented in this report are part of a broader effort by the Inclusive Economy Lab to understand what organizations provide postsecondary and college success supports to low-income CPS students. The Inclusive Economy Lab conducted a landscape scan of college access and success organizations serving high school students in Chicago, including OneGoal, to develop a holistic picture of district supports at the student-level. A descriptive analysis of participant data followed which allowed us to understand which students are being served. Quasi-experimental program evaluations of other college access and success programs in Chicago will also be conducted to produce a meta-analysis based on the findings. This process will facilitate a deeper understanding of how best to support college access and success for young people in Chicago, yield actionable evidence to improve practice, and help more students achieve upward social mobility.

The Inclusive Economy Lab is also separately partnering with OneGoal on a forthcoming, multi-year, RCT evaluation of OneGoal's traditional program model that can account for both observable and unobservable differences between OneGoal Fellows and their control group counterparts and provide even stronger causal evidence of OneGoal's impact on students' academic outcomes during and after program participation.

APPENDICES

Appendices

APPENDIX A: GLOSSARY

- College enrollment – Students enrolling in a 2-year or 4-year college within the first six months after graduating high school.
- College graduation – Students obtaining an associate or bachelor’s degree within six years of graduating high school.
- EXPLORE – One of CPS's primary assessment measures administered to ninth graders through the end of SY 2015 used to track students' progress toward college and career readiness.
- Propensity score matching – A quasi-experimental method where a comparison group is determined via matching each treated individual to a non-treated individual, based upon shared characteristics. This match on observable characteristics may provide meaningful counterfactuals for the experience that the treated individual would have had without treatment. As such, a researcher can estimate the impact of an event using PSM. However, for this estimation to be accurate, we must assume that the characteristics we match upon are representative of unobserved variation in personal experience.
- Year-to-year persistence – Students who directly enroll in a 2-year or 4-year college within six months of graduating high school and are still enrolled in a 2-year or 4-year college at any point during the following academic year.

APPENDIX B: SUMMARY TABLE OF OUTCOMES

| Outcome Variable | Cohorts | n | OneGoal Fellows | Comparison Group | Estimate | Standard Error | t-Value | p-Value |
|---|-----------|-------|-----------------|------------------|----------|----------------|---------|---------|
| Junior Year ACT Scores | 2011-2017 | 6676 | 17.09 | 16.95 | 0.14 | 0.08 | 1.78 | 0.07 |
| Junior Year SAT Scores | 2018-2020 | 7388 | 886.32 | 884.89 | 1.43 | 2.49 | 0.58 | 0.56 |
| Attendance Rate (12 th Grade) | 2011-2020 | 14064 | 0.89 | 0.87 | 0.03 | 0.00 | 12.76 | 0.00 |
| Unweighted GPA (12 th Grade) | 2011-2020 | 14064 | 2.73 | 2.69 | 0.04 | 0.01 | 7.39 | 0.00 |
| High School Graduation | 2011-2019 | 11914 | 0.99 | 0.83 | 0.16 | 0.01 | 23.63 | 0.00 |
| Number of Submitted College Apps | 2016-2020 | 10720 | 9.95 | 8.39 | 1.56 | 0.14 | 11.52 | 0.00 |
| Direct College Enrollment | 2011-2019 | 11914 | 0.67 | 0.47 | 0.20 | 0.01 | 20.55 | 0.00 |
| Enrollment in Match Institution (CPS) | 2011-2019 | 11914 | 0.21 | 0.14 | 0.07 | 0.01 | 9.97 | 0.00 |
| Enrollment in Match Institution (OneGoal) | 2011-2019 | 11914 | 0.20 | 0.12 | 0.08 | 0.01 | 11.16 | 0.00 |
| Year-to-Year Persistence | 2011-2018 | 9228 | 0.49 | 0.34 | 0.16 | 0.01 | 14.74 | 0.00 |
| Graduated (Bachelor’s or Associates’) | 2011-2014 | 2232 | 0.28 | 0.20 | 0.08 | 0.02 | 4.03 | 0.00 |

APPENDIX C: ONEGOAL SELECTIVITY GUIDELINES

OneGoal Chicago's Selectivity Index and the framework used to match Student Selectivity Levels with Barron’s College Selectivity Ratings. This index is updated annually, so the selectivity levels have varied over time.

APPENDICES

| FY18 CHI | | GPA | | | | | | | | |
|-------------|---------|--------------------|--------------------|--------------------|--------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| SAT | ACT | 0.00 – 1.74 | 1.75 – 1.99 | 2.00 – 2.24 | 2.25 – 2.49 | 2.50 – 2.74 | 2.75 – 2.99 | 3.00 – 3.24 | 3.25 – 3.74 | 3.75 – 4.00 |
| 1090 – 1600 | 24 – 36 | Somewhat Selective | Somewhat Selective | Somewhat Selective | Somewhat Selective | Selective/ Very Selective | Selective/ Very Selective | Selective/ Very Selective | Very Selective | Very Selective |
| 980 – 1080 | 21 – 23 | Four-Year Eligible | Four-Year Eligible | Somewhat Selective | Somewhat Selective | Selective | Selective/ Very Selective | Selective/ Very Selective | Selective/ Very Selective | Selective/ Very Selective |
| 870 – 970 | 18 – 20 | Four-Year Eligible | Four-Year Eligible | Somewhat Selective | Somewhat Selective | Selective | Selective | Selective/ Very Selective | Selective/ Very Selective | Selective/ Very Selective |
| 790 – 860 | 16 – 17 | Two-Year College | Four-Year Eligible | Four-Year Eligible | Somewhat Selective | Somewhat Selective | Somewhat Selective | Somewhat Selective | Selective | Selective/ Very Selective |
| 200 – 780 | 1 – 15 | Two-Year College | Four-Year Eligible | Four-Year Eligible | Four-Year Eligible | Four-Year Eligible | Four-Year Eligible | Four-Year Eligible | Somewhat Selective | Somewhat Selective |

| Student Rating | College Rating |
|------------------------------------|--|
| Very Selective Colleges | Very Competitive (+) Highly Competitive Highly Competitive (+) Most Competitive |
| Selective/ Very Selective Colleges | Very Competitive Very Competitive (+) Highly Competitive |
| Selective Colleges | Competitive (+) Very Competitive |
| Somewhat Selective Colleges | Competitive |
| Four-Year Eligible | Noncompetitive Less Competitive |
| Two-Year Colleges | Two-Year College |

APPENDIX D: CPS SELECTIVITY GUIDELINES

CPS's current selectivity guidelines uses the College Match Grid (which illustrates categories of access types based on CPS graduates' GPAs and ACT scores and patterns of college enrollment) and the College Selectivity List¹² to identify a student's general match level and potential colleges of interest.

¹²http://vonsteubencollegeandcareer.weebly.com/uploads/6/3/1/2/63125945/us_college_selectivity_list.xls

APPENDICES

| | | Unweighted GPA in Core Courses | | | | |
|-------------|-------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|-----------------------------------|
| | | < 2.0 | 2.0 - 2.4 | 2.5 - 2.9 | 3.0 - 3.4 | 3.5 - 4.0 |
| Missing SAT | Missing ACT | Two Year Colleges | Less Selective Four-Year Colleges | Somewhat Selective Colleges | Selective Colleges | Selective Colleges |
| < 940 | < 18 | Two Year Colleges | Less Selective Four-Year Colleges | Somewhat Selective Colleges | Somewhat Selective Colleges | Selective Colleges |
| 940 - 1050 | 18 - 20 | Less Selective Four-Year Colleges | Somewhat Selective Colleges | Somewhat Selective Colleges | Selective Colleges | Selective/Very Selective Colleges |
| 1060 - 1150 | 21 - 23 | Somewhat Selective Colleges | Somewhat Selective Colleges | Selective Colleges | Selective Colleges | Selective/Very Selective Colleges |
| 1160+ | 24+ | Somewhat Selective Colleges | Selective Colleges | Selective/Very Selective Colleges | Very Selective Colleges | Very Selective Colleges |

APPENDIX E: BALANCE TEST RESULTS

| Variable | Standardized Mean Difference | Adjusted Variance Ratio |
|---|------------------------------|-------------------------|
| Distance | 0.00 | 1.00 |
| Attendance Rate | 0.03 | 0.97 |
| Missing Attendance Indicator | 0.00 | --- |
| PSAT Score | 0.05 | 91.4% |
| Missing PSAT Indicator | 0.01 | --- |
| College Graduation Rate | 0.04 | 1.06 |
| Median Household Income | 0.05 | 1.06 |
| Unweighted GPA (10 th Grade) | 0.10 | 0.63 |
| Ethnicity (Asian) | 0.00 | --- |
| Ethnicity (Black) | -0.02 | --- |
| Ethnicity (White) | 0.00 | --- |
| ESL Indicator | -0.01 | --- |
| Student Repeater Indicator | 0.00 | --- |
| IEP Indicator | -0.03 | --- |
| Free or Reduced Lunch Indicator | -0.01 | --- |
| School Type (Contract) | -0.00 | --- |
| School Type (Magnet) | 0.00 | --- |
| School Type (Selective Enrollment) | 0.00 | --- |
| School Type (Turnaround) | 0.00 | --- |

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