

# COLLEGE ADVISING IN STATES WITH FREE COMMUNITY COLLEGE PROGRAMS

Kathryn Babbin  
Frank Batten School of Leadership and Public Policy  
University of Virginia  
May 2019

## TABLE OF CONTENTS

<b><i>Important Details</i></b> .....	<b>4</b>
<b>Acknowledgements</b> .....	<b>4</b>
<b>Disclaimer</b> .....	<b>4</b>
<b>Honor Pledge</b> .....	<b>4</b>
<b><i>Executive Summary</i></b> .....	<b>5</b>
<b><i>Introduction</i></b> .....	<b>6</b>
<b><i>Background</i></b> .....	<b>8</b>
<b>History of Free CC</b> .....	<b>8</b>
<b>Recent Free Community College Trends</b> .....	<b>8</b>
<b><i>Literature Review</i></b> .....	<b>10</b>
<b>Community College Outcomes</b> .....	<b>10</b>
Enrollment .....	10
Completion .....	10
<b>Free Community College</b> .....	<b>11</b>
<b>College Match</b> .....	<b>12</b>
<b>Looking Forward</b> .....	<b>13</b>
<b><i>Client Overview</i></b> .....	<b>14</b>
<b><i>Alternatives</i></b> .....	<b>17</b>
<b>Alternative One: Utilize Summer Training</b> .....	<b>18</b>
<b>Alternative Two: Match Sheets for Advisors</b> .....	<b>18</b>
<b>Alternative Three: Better Understanding Financial Aid and Lifetime Earnings</b> .....	<b>18</b>
<b><i>Criteria</i></b> .....	<b>20</b>
<b>Cost</b> .....	<b>20</b>
<b>Effectiveness</b> .....	<b>20</b>
<b>Administrative Operability</b> .....	<b>20</b>

<b><i>Evaluation Matrix.....</i></b>	<b><i>21</i></b>
<b><i>Evaluation of Alternatives .....</i></b>	<b><i>22</i></b>
<b>Alternative One: Utilize Summer Training .....</b>	<b>22</b>
Cost .....	22
Effectiveness.....	22
Administrative Operability.....	23
Total Score: 10/15 points.....	23
<b>Alternative Two: Match Sheets for Advisors .....</b>	<b>23</b>
Cost .....	23
Effectiveness.....	23
Administrative Operability.....	24
Total Score: 12/15 points.....	24
<b>Alternative Three: Better Understanding Financial Aid and Lifetime Earnings .....</b>	<b>24</b>
Cost .....	24
Effectiveness.....	25
Administrative Operability.....	25
Total Score: 9/15 points .....	26
<b><i>Recommendation.....</i></b>	<b><i>27</i></b>
<b>Use Match Sheets to Explain Free Community College Programs.....</b>	<b>27</b>
<b><i>Implementation and Next Steps.....</i></b>	<b><i>28</i></b>
<b><i>Appendix 1: Benefit Cost Analysis .....</i></b>	<b><i>29</i></b>
<b><i>Appendix 2: Match Sheet Example from VCAC.....</i></b>	<b><i>36</i></b>
<b><i>Works Cited .....</i></b>	<b><i>37</i></b>

## IMPORTANT DETAILS

### ACKNOWLEDGEMENTS

Thank you to College Advising Corps for agreeing to work with me and supporting my efforts on this project. Thank you to Professor Bassett for providing feedback and kind words to us all throughout the Applied Policy Project process. Thank you to Allie Crume for editing and keeping me sane along the way.

### DISCLAIMER

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other entity.

### HONOR PLEDGE

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

## EXECUTIVE SUMMARY

A current concern for College Advising Corps, the client, is how they should adjust their college advising practices in states that with free community college programs. Some students are well matched with free community college programs, meaning that their GPA and test scores are similar to the institutions' numbers. Other students are over qualified for community college based on their academic markers but may be tempted to under-match based because the option is free. **Free community college programs incentivize certain students to under-match from a four-year college to a community college, which, on average, decreases college completion rates and expected life-time earnings.**

This analysis considers three alternatives for how College Advising Corps could adjust their practices to help over-qualified students fully consider the consequences of under-match.

- Alternative One: Utilize Summer Training
- Alternative Two: Match Sheets for Advisors
- Alternative Three: Better Understanding Financial Aid and Lifetime Earnings

These alternatives were evaluated on projected cost, effectiveness and administrative operability. Based on the criteria, alternative two is the best choice. For this alternative, CAC should adjust advisor materials referred to as match sheets to account for free community college. These sheets would help students to identify if they are well matched with free community college and encourage conversations between students and advisors about the importance of match.

Alternative two has a higher cost of materials than a presentation on the information, but will likely be more effective at consistently reminding advisors to look for students at risk of under-matching. It incorporates materials that are already in use and requires the least amount of upkeep of the three alternatives. Overall, using updated match sheets is the best alternative to help CAC continue to provide high-quality advising to students in states with free community college.

## INTRODUCTION

College Advising Corps (CAC) is an organization that places college advisors at schools to help guide high school students through the college process. Their mission is, “to increase the number of low-income, first-generation college, and underrepresented high school students who enter and complete higher education” (“Mission & History,” n.d.). They operate in sixteen states and advisors provide services to schools and students who might otherwise only meet with a college counselor once during their entire time in high school (“Where We Work,” n.d.). CAC is concerned about how state-level policies and potentially federal level policies surrounding free community college should influence their interactions with students.

Between 2016-2017, 8.7 million students were enrolled in two-year community colleges in the United States (Ginder, Kelly-Reid, & Mann, 2018). A community college degree or associate’s degree is a two-year degree that covers a wide range of programs and is offered by both for-profit and public institutions. Public community college providers are non-profit organizations similar to traditional four-year providers and are central to free community college programs, as they are run by their respective states.

Over the past decades, there has been an increased emphasis on having a college degree as a symbol of status as a skilled worker (Holzer, 2015). In response to the new demand for college degrees from employers, multiple states have implemented free community college programs of various kinds. In the 2016 election, Bernie Sanders even campaigned on the idea of free community college as a national policy, in line with the free public school system in the United States. Different states have ranging requirements to qualify for free community college programs and have had different levels of success in terms of completion rates (Deming & Dynarski, 2009).

Community college students tend to have very low completion rates and rarely transfer to four-year programs upon completing their associate’s degree (Goodman, Hurwitz, & Smith, 2017). Not only is free community college a largely unproven model, it is very costly for the state. Some argue that community college should be free to increase equity in higher education, although many of the restrictions on free community college, such as minimum GPA, restrict access for students regardless. It is uncertain if free community college will help to overcome issues of equity and increase long-term outcomes, but as new research emerges, CAC will need to decide on an organization-wide approach towards free community college.

Free community college programs increase community college attendance, but community college is associated with low completion rates and low returns on investment. This is particularly a concern for students who are over-qualified for community college based on their academic markers. College match stems from the idea that students should consider colleges that are aligned with student GPA and test scores. Under-match or attending a school a student is over-qualified for, is associated with lower completion rates and as a result, lower expected

lifetime earnings (Handel, 2014). Match is not the only factor in a student's college decision process but is one with substantial consequences that should be fully considered.

**Overall, free community college programs incentivize certain students to under-match from a four-year college to a community college, which, on average, decreases college completion rates and expected life-time earnings.**

## BACKGROUND

### HISTORY OF FREE CC

The idea of free college dates back to the 1860s in California, when the University of California system was formed and students were promised free tuition (Nagaoka, Roderick, & Coca, 2009). California wanted to increase the number of college graduates in their state, so the state decided to make college free. In the 1970s, California's free tuition came to include a fee and today students pay thousands of dollars to attend California's schools. California's history reflects the two main challenges in providing free higher education. The first is how many students will take advantage of the program and the second is how will they be funded. In the early 1900s, few students were attending college, but as the number increased, it became less realistic for the state to provide free four-year college for all. The California example shows that free college programs can become cost prohibitive. With the increased demand for college degrees, it becomes more expensive to provide services, especially as higher education costs continue to rise.

Today, there is increased demand for skilled workers, which has been a driving force for implementing free community college programs (Harris, 2018). Additionally, many states choose to invest in free community college to increase equity in higher education (Bragg & Durham, 2012). The first free community college began in 2005 in Kalamazoo, Michigan (Harris, 2018). The entire district was offered free college tuition and began a new trend for district-level programs. Tennessee was the first state to offer free community college to their entire population through their program, Tennessee Promise, which was announced in 2014. It sparked national attention along with a new free community college program in the city of Chicago. President Obama mentioned these two programs in his 2015 State of the Union address, stating, "I want to spread that idea all across America, so that two years of college becomes as free and universal in America as high school is today" (Harris, 2018). Soon after his speech, free community college on a national level became a major talking point for Democratic candidates in the 2016 elections. Senator Bernie Sanders was the first to make a statement on the issue, but Senator Elizabeth Warren also came to support the issue and it continued to be a topic of discussion after the primaries. Free community college has not been a priority for the Trump administration but has continued to develop on the state level. It may become a topic of conversation once more as the candidates prepare for the 2020 elections.

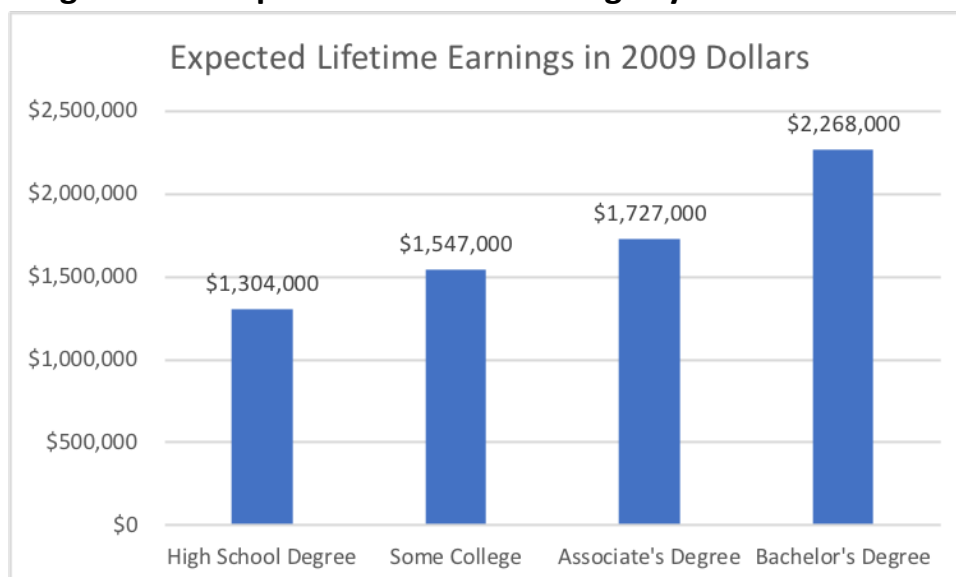
### RECENT FREE COMMUNITY COLLEGE TRENDS

Over the past few decades, there has been increased demand from employers for employees with college degrees (A. Harris, 2018). From an economic perspective, education is both a private and public good (Labaree, 1997). As a private good, individuals want more education because it helps them to be successful later in life in terms of earnings and job type. For example, the difference in expected lifetime earnings between a high school graduate and a college graduate is almost one million dollars (See Figure One) (Carnevale, Rose, & Cheah,



2011). If education were simply a private good, the markets would reach equilibrium at the most efficient level of education for each individual (Labaree, 1997). Education is also a public good, which means that it is nonexcludable and nonrival. Nonexcludable means it is very costly to prevent others from using the good and nonrival means that one person using the good does not prevent others from using it. Typically, public goods are underprovided. Education is a public good because the effects benefit the country as a whole since it promotes the growth of the economy and fills jobs in needed fields. There is an increasing demand for higher education from an employer standpoint, but it is currently underprovided. As an underprovided good, there is room for policy intervention. This analysis explores free community college as a potential policy intervention.

**Figure One: Expected Lifetime Earnings by Education Level**



Source: Carnevale, Rose, & Cheah, 2011

According to a 2017 report by the Institute for Higher Education Policy, there has been a decline in state funding for higher education over the past few decades (Poutré, Rorison, & Voight, 2017). With less money from the state and increasing cost of tuition, far above the rate of inflation or income growth, low-income students are most affected. Even after Pell Grants, federally funded grants for low-income students, the average low-income student must finance the equivalent of more than 100% of their family's annual income, for just one year of college (Poutré et al., 2017). For comparison, high-income students on average only need to finance 15% of their family's annual income. Rising cost of tuition and declining state aid increase the need for programs such as free community college, which aim to create greater equity in higher education.

## LITERATURE REVIEW

### COMMUNITY COLLEGE OUTCOMES

#### ENROLLMENT

A 2009 quasi-experiment on the relationship between cost and educational attainment found that reducing costs increases entry and persistence in community colleges (Deming & Dynarski, 2009). The most effective programs were the ones that required little administrative effort or paperwork on the part of the student, but this type of program also opens up the intervention to more people. For example, the Free Application for Federal Student Aid (FAFSA) requires substantial paperwork and is considered a major barrier to entry for many low-income and non-English speaking families. In comparison, the Georgia Hope scholarship simply requires that students have a 3.0 GPA to qualify for free tuition and fees at any public college in Georgia. More broad programs, such as the Georgia Hope scholarship, were more effective at encouraging college enrollment and completion.

#### COMPLETION

Community college completion is an area of concern for education researchers. Based on a 2017 quasi-experimental study, community college enrollees tend to have very low completion rates for two-year programs and near zero completion rates for four-year programs when compared to their peers who attend four-year colleges (Goodman, Hurwitz, & Smith, 2017). The study found that students who received guaranteed access to four-year colleges through an automatic admission SAT threshold in the state of Georgia tended to choose to attend four-year colleges over two-year alternatives. The students who attended a four-year school through this program were 41% more likely to complete a bachelor's degree than their peers who fell just below the threshold. Among low-income students, the four-year graduation rate tripled. On average, the increase in Bachelor's degrees came from students who would have otherwise enrolled in a community college program, but it did not decrease Associate's degrees, meaning that the students who gained access to the four-year system would have likely attended a community college without completing a degree. Most importantly, despite barely qualifying to attend the four-year public institutions, the students who enrolled were as likely to complete a degree as the average for the overall institution. This is relevant to states with free community college program states because a student whom undermatches will likely take on the average completion rate of the community college, which is lower comparatively. The authors applied their findings to free community college programs and hypothesize that such programs may attract students who may not have otherwise attended college, but will likely also cause some students to attend community college instead of a four-year option. The switch from a four-year college to a two-year college would likely decrease the chances of completing college due to decreased access to quality resources.

In 2015, Monaghan and Attewell published a study using longitudinal transcript data and propensity scores to examine the mechanisms that prevent degree completion among students who transferred from community college into four-year programs. They compared the outcomes of students who started at community college and transferred to four-year institutions to students who went straight into a four-year degree program (Monaghan & Attewell, 2015). They found that until the time of transfer, both groups had similar academic achievement, but that after transferring, the number of credits achieved among transfer students drops due to increased employment among students who began at community colleges and greater likelihood of dropout. The other major factor was the number of credits that the community college students lost upon transferring to the new institution. It is common for some credits to not transfer from school to school, but the study found that the greater the number of credits lost, the lower the chance of BA completion within six years.

#### FREE COMMUNITY COLLEGE

Currently, there are sixteen states that have free community college programs (Jones & Berger, 2018; The Associated Press, 2019). Each program has varying qualifications, restrictions, and requirements (Jones & Berger, 2018). For example, some programs do not cover fees, others require a minimum GPA and some are not available for part-time students. Multiple other programs have been proposed but have failed to become state law. Overall, Tennessee and New York have two of the most widespread community college programs, Tennessee Promise and the Excelsior Scholarship, respectively. A 2018 study that examined the cost of attendance before and after the implementation of free community college programs in these states found that the programs tend to benefit high-income students more than low-income students (Poutre & Voight, 2018). These programs are last dollar programs, which means they cover the remaining expenses after scholarships and Pell grants have been applied to the cost of tuition. With last dollar programs, more money is ultimately spent on students who do not qualify for financial aid such as Pell grants, unintentionally helping middle and high-income students more than low-income students. Additionally, last dollar scholarships in New York and Tennessee do not cover room and board as well as other expenses, which still leaves substantial need for low-income students.

The majority of major free community college programs are promise programs, meaning that they are place-based and every student in that area that meets the requirements is guaranteed a scholarship. Based on a review of promise programs throughout the United States, researchers found that areas with promise programs saw increases in housing prices, higher student performance in secondary school and increases in post-secondary enrollment (Swanson, Watson, Ritter, & Nichols, 2016). The authors highlight that these trends are based on up to 80 different promise programs, but that certain ones tend to feature more prominently in the research. This study demonstrates that promise programs are effective at increasing positive outcomes, both within the school and in the locality itself.

A 2018 Brookings study examined how access to free community college changed both college-going behavior and long-term outcomes (Harris et al., 2018). It is the only randomized control trial that exists at this point regarding free community college programs. The Degree Program in Minneapolis randomly selected 18 high schools to receive \$12,000 of scholarship money at any state institution, which was enough to cover the cost of community college. The researchers then tracked the students at those schools to determine the impact of the scholarship. In order to qualify, students were required to have a 2.5 GPA, a 90% attendance record in high school and fill out the FAFSA.

Access to free community college changed initial behavior, but not long-term outcomes. The program changed student motivation toward college and concrete actions such as increases in the number of students filling out the FAFSA and increases in the number of schools to which students applied. The program did not change high school performance and whether the students decided to go directly to college. It had a small impact on persistence in two-year programs, but not four-year programs. The authors are still evaluating longer-term outcomes at this point. In response to the results, the authors recommend that promise programs do not put performance requirements in place as it prevented students from being able to take advantage of the program. There was no evidence that the GPA cutoff served as a motivator to students and it prevented many students from participating. Their second recommendation was to use promise scholarships and other forms of financial aid to change college-going culture at schools. The program was able to change students' attitudes about college by making college seem like a realistic opportunity could help students to apply and enroll.

## COLLEGE MATCH

One major concern among policymakers is that free community college programs may incentivize students who would have been successful in a four-year setting to enroll in a community college instead and increase their risk of dropping out. When a student attends a school that is below their qualifications it is known as under-matching. A 2009 study of Chicago public schools was the first major examination of college match (Nagaoka, Roderick, & Coca, 2009). The research team found that college match was most important for high achieving students. Students who qualified for highly selective colleges, but attended less selective schools were less likely to graduate. For example, 97% of students with a 4.0 who attended Northwestern University graduated in 150% of time, but only 29% of their peers who chose to attend Northeastern Illinois University graduated. Match was less important for low-achieving students, who were unlikely to graduate regardless of match quality. While match is still on the forefront a decade later, some researchers are beginning to question if match is truly the issue or if more selective schools are higher quality (Goodman et al., 2017). It is still unclear at this point which is the driver behind completion rates. It is still unclear at this point which is the driver behind completion rates, but both are relevant to free community college debate, especially since it has been shown that attending more selective colleges is most beneficial to low-income students (Dale & Krueger, 2002).

## LOOKING FORWARD

As free community college programs continue to expand or be implemented in new states, researchers should use the opportunities to evaluate the policy. Currently, major program evaluations are underway, but programs such as Tennessee Promise have only existed for a few years, meaning there is limited access to long-term data. Continuing to track students in free community college programs will be vital to policymakers in the future, particularly as free community college is considered on the national level.

## CLIENT OVERVIEW

CAC is a national-level organization with the mission “to increase the number of low-income, first-generation college, and underrepresented high school students who enter and complete higher education” (“Mission & History,” n.d.). They complete this mission by connecting recently graduated college students with high school students in the college process. These recent graduates complete intensive training with CAC and serve as college advisors in schools with high numbers of students within the target populations. Each advisor applies to CAC through a partner institution, which are universities located in sixteen states across the United States (“Where We Work,” n.d.). In total there are twenty-five partner institutions and they work to implement CAC’s mission with the help of the advisors.

CAC tracks a number of key metrics on their advisors’ success in schools (“How We Track Results,” n.d.). They include:

- Campus Visits
- College Representative Visits and College Fairs
- SAT/ACT Registration
- College Workshops
- College Application Submissions
- FAFSA Completion
- Scholarship Dollars Awarded
- Parent Engagement

These outcomes represent a number of important indicators in the higher education space. For example, if students do not complete the SAT or ACT, they are severely limited in the types of institutions to which they are able to apply. Similarly, completing the FAFSA gives the students access to important information on their eligibility for many funding streams in higher education, but the complicated forms and limited student access to information are often barriers to completion (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2011).

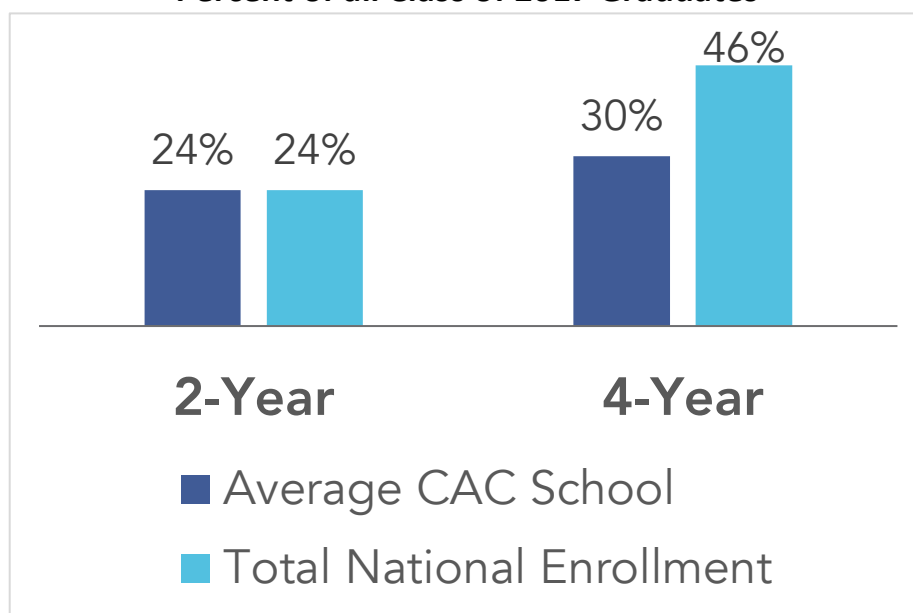
In addition to tracking specific outcomes on the school level, they also collect information on the national level to assess overall impact. CAC highlights a number of impact indicators on a national level for the 2016-2017 school year. In just one year, their advisors held 539,601 individual meetings with seniors, arranged 98,282 visits to college campuses, and helped 86,728 seniors to complete their FAFSA (“Our Results,” n.d.). They were able to serve over 100,000 students and their advisors impacted important outcomes for their students.

According to a 2017 CAC survey administered with the help of researchers at Stanford University, students who met with a CAC advisor were 30% more likely to apply to college and 24% more likely to apply to three or more colleges than students who did not meet with a CAC advisor (“Impact Summary,” n.d.). These are important outcomes because students need to apply to college to make it an option and there is evidence that increasing the number of schools a student applies to increases college match and their likelihood of attending a higher

quality school (Dale & Krueger, 2002). Additionally, students were 13% more likely to take the SAT or ACT and 25% more likely to complete the FAFSA, which are both major barriers to applying to and attending college (“Impact Summary,” n.d.). Finally, students were 24% more likely to be accepted into a college or university than their peers who did not meet with at CAC advisor (“Impact Summary,” n.d.). Overall, CAC students saw substantial increases in important markers in higher education research.

CAC’s mission is to increase both enrollment and completion rates and therefore they track these outcomes as well. According to CAC’s Postsecondary Trends and Outcomes Report, of the students present in the 2017 CAC cohort, 24% of students attended a two-year program, which is the same as national enrolment for that year (See Figure Two) (CAC, 2018). Only 30% of students attended a four-year program, compared to the national average of 46%. CAC believes that this discrepancy is likely due to the types of populations they serve and the number of college-ready students in their schools. Of students who enroll in postsecondary education, about 47% of CAC students attend two-year programs, while the other 53% attend four-year programs (CAC, 2018).

**Figure Two: Two-Year vs. Four-Year Enrollment Rates:  
Percent of all Class of 2017 Graduates**



Source: College Advising Corps, 2018

In terms of persistence, 71% of CAC seniors who enrolled in post-secondary programs in 2016 persisted into their second year (CAC, 2018). Enrolling in the second year of a program is considered an important outcome in higher education because it signals that the students returned after the first summer. Based on an evaluation completed with partners at Stanford University and EASE, 53% of students in the 2011-2012 CAC cohort who enrolled in a four-year program received a degree within six years (E. Martin, personal communication, 2019). For comparison, the national six-year graduation rate for students in a four-year program is 60%,

but the graduation rate for Pell-eligible students is only 49% (“The Pell Divide,” 2018). The population CAC serves is typically low income and representative of the Pell-eligible sample.

As policies surrounding free community college continue to expand, CAC is considering how advisors can best serve students in states with access to free community college. Currently, CAC has advisors in four states with free community college programs: New York, Rhode Island, Missouri, and California (Jones & Berger, 2018; “Where We Work,” n.d.). California is the state that has most recently implemented a free community college initiative and the program is still in development (Zinshteyn, 2019). The potential expansion will increase the number of students with access in a large state with over one hundred CAC schools (“Where We Work,” n.d.). CAC’s goal is to help their target populations enroll in and complete college and by fully understanding the challenges and benefits associated with free community college, they will be able to help their advisors serve their students to the best of their abilities.



## ALTERNATIVES

CAC advisors work hard to ensure that their students gain access to, enroll in and are successful in an appropriate college upon graduation. The organization's approach to advising students is through match and fit advising. Match is working to align students' academics with their college options (National College Access Network, 2017). For example, an ideal match would be a student applying a school with average GPA and SAT scores that are similar to the student in question. There is research that shows that match is important to college advising because students are more likely to graduate when they attend schools aligned with their academic markers (Nagaoka et al., 2009). Under-match is when students choose to attend a school that is below their qualifications. Some may argue that attending a less competitive school may allow the student to stand out and excel in comparison to peers, but under-match is associated with low completion rates. The consequences of ignoring match can be substantial for students.

Fit encompasses location, distance to family, school quality, support systems and any other factor other than the student's academic standing (National College Access Network, 2017). A good fit might be a student finding a school that is close to home if remaining close to home is important to the student. This approach to counseling involves accessing the students' success in school thus far, but also listening to the students' priorities in the college search process.

Free community college programs have the potential to affect both match and fit for students. As has been established, college match is an important factor in advising students. Some students are well matched with schools in the community college system and others are well matched with four-year colleges or universities. A major concern in advising students when free community college is an option, is that students may be drawn to under-match. Students who are well matched with community college should take that path, but in the case that students are better matched with a four-year option, choosing community college will likely have an impact on long-term earnings (See Appendix One for BCA). Additionally, emerging research indicates that overall school quality may be even more important than match itself (Goodman et al., 2017). One option for a student in a free community college state would be to start at a community college and then transfer to a four-year institution. In fact, 70% of students who enter the community college system intend to transfer to a four-year institution. The reality is that only 12% of students who entered community college in 2011 completed a bachelor's degree within six-years (Community College Research Center, n.d.). Students who are well-matched with four-year colleges are on average most likely to be successful if they attend a four-year college.

While match is of great concern to researchers and advisors fit also matters. Each student has different personalities and needs in terms of their ideal fit. Taking advantage of a free community college program may be a necessity due to unique financial situations or perhaps a community college is the only option in a particular area and the student needs to be close to home for family reasons. There are many reasons why fit may override match in advising, but it

is important for both the advisor and the student to be aware of the downsides of prioritizing fit over match.

The following alternatives aim to help CAC advisors in states with free community college programs identify situations where students may be most tempted to under-match based on cost. The analysis will focus on students who are prepared for a four-year environment but may be drawn to the idea of a free community college program. These students will be referred to as marginal students because they fall on the margin of free community college and four-year programs.

#### ALTERNATIVE ONE: UTILIZE SUMMER TRAINING

Advisors receive a month-long extensive training session the summer before they start working in a school. During this training, they learn about the schools in their area, financial aid, and match and fit advising practices. One option would be to include a session on the advantages and disadvantages of free community college programs in the respective state. Free community college programs can have a wide variety of characteristics and it would be important to incorporate those unique aspects into the presentation. The presenter could explain the logic behind last dollar scholarship programs and how it will be relevant to the CAC population of students. Taking time to understand the logistics of the program will help lay the groundwork and then the presenter can address how free programs could potentially impact match and fit for the students. The training would allow all of the advisors in a region to receive similar information and gain a better understanding of the economic forces at work that might incentivize students to move towards the free option.

#### ALTERNATIVE TWO: MATCH SHEETS FOR ADVISORS

When advisors meet with students they often have resources available such as match sheets to help communicate to students which schools would likely be a safety, match or stretch school (See Appendix Two). The goal of the sheets is to show students a range of schools that they may wish to research or consider based on student GPA and SAT scores. One option would be to make a note on the sheet about the free community college program and how it should be a consideration for students already matched with community college. The note on the sheet would serve as a reminder for both students and advisors that the program exists and may be a good fit for those within the community college range on the sheet but would be less appropriate for those who match with four-year colleges. The advisors would require an introduction to the sheets and a summary of why the note on free community college programs is worth including on the sheet.

#### ALTERNATIVE THREE: BETTER UNDERSTANDING FINANCIAL AID AND LIFETIME EARNINGS

One of the main reasons that free community college programs are attractive is that they are free and guaranteed to be free, given that the student meets a number of criteria potentially including GPA, filing a FAFSA, community service hours or other performance indicators. CAC advisors are placed in schools with many students from low-income families. The financial aid system in the United States is extremely complicated, but efforts to help low-income students access college through a greater understanding of the financial aid have been fairly successful (Bettinger et al., 2011). States that are investing in free community college programs likely have other programs designed to help low-income students in addition to Pell grants.

For example, the average annual cost of tuition for community college in Tennessee is \$4,000, while the average Pell grant in the United States is \$4,010 (College Board, 2017). Pell grant awards are determined by financial need and are targeted towards students like the ones served by CAC ("Federal Pell Grants," 2019). In this case, the Pell grant would cover the cost of tuition for the average student receiving a grant, leaving nothing for the Tennessee Promise program to cover. The main takeaway is that community college may be a free option regardless of a promise program.

To help the students to overcome concerns about college cost that may drive them towards free community college, advisors could provide basic sheets that outline the costs, benefits, and funding streams for community college and four-year college options. Showing students how they could fund college and potential differences in lifetime earnings may help students to better understand that college is an investment in their future. The advisors would require background information on why the intervention is relevant and the risk of under-match associated with free community college programs.

## CRITERIA

The previously outlined alternatives will be evaluated with the following criteria: cost, effectiveness, and administrative operability. These criteria are designed to be well-aligned with the major goals behind the alternatives and will help to make a clear and balanced policy recommendation.

### COST

An ideal alternative will be low-cost to the organization. CAC is a non-profit organization and interventions meant to address a very particular subset of students in the United States should not place an unrealistic burden on CAC or their partner universities. Once the intervention has been implemented it should have low upkeep costs as well so that it is easy to justify continuing to use the resources.

A low-cost alternative will have little initial cost of creation and will require little upkeep. The major costs of the alternatives are employee time and materials.

### EFFECTIVENESS

An ideal alternative will effectively communicate the information to the advisors and be utilized consistently throughout the year-long advising process with the students. Whichever alternative is implemented, it needs to communicate the potential challenges, such as lower completion rates, associated with under-matching. It should also serve as a continuous remind for the advisors to consider the information as they speak with students so that they start to recognize students who might be at risk of under-match and incompleteness due to the option of free community college.

A highly effective alternative will get detailed information to advisors, help marginal students understand their options, be a consistent reminder for advisors to look out for marginal students.

### ADMINISTRATIVE OPERABILITY

An ideal alternative will require minimum upkeep from CAC administration and can be easily implemented. It is not realistic to expect CAC to be constantly needing to update materials or adjusting their practices. A solution with low upkeep will allow advisors or students to have consistent access to quality information that can help to inform students of the costs and benefits of choosing to utilize a free community college program instead of a four-year option.

An alternative that is high in administrative operability will require little upkeep from CAC or partner institutions and can be easily integrated into the daily lives of the advisors.

## EVALUATION MATRIX

	Cost	Effectiveness	Administrative Operability	Total
Alternative One: Utilize Summer Training	<b>5</b> -Creating the presentation -Occasional upkeep	<b>2</b> -Communicates detailed to advisors -Diffuse information to students -One-time intervention	<b>3</b> -Little upkeep, can be general info with a little state specific -Easily fits into the training	<b>10/15</b>
Alternative Two: Match Sheets for Advisors	<b>3</b> -Creating the sheets for relevant sites -Printing	<b>4</b> -Communicates general info to advisors -Communicates general info to students -Consistently thinking about the marginal students	<b>5</b> -Little upkeep since colleges do not change often -Advisors are already using the tool or similar ones	<b>12/15</b>
Alternative Three: Financial Aid Information	<b>2</b> -Creating the sheets for relevant sites -Printing -Cost of yearly upkeep	<b>4</b> -Communicates general info to advisors -Communicates general info to students -Consistently thinking about marginal students	<b>3</b> -Yearly updates based on new policies/Pell grant information -Would take time to explain, but seems reasonable, especially when already discussing financial fit	<b>9/15</b>

\*Darker shades of blue indicates a higher rating on the relevant criteria.

\* Alternatives are scored one to five on each criterion (one is the lowest rating and five is the highest).

## EVALUATION OF ALTERNATIVES

Each alternative will be evaluated based on cost, effectiveness and administrative operability. The alternatives will be given a one to five rating for each criterion (one is the lowest rating and five is the highest). Each criterion will be weighted evenly in this analysis and the alternative with the highest score will be the best option.

### ALTERNATIVE ONE: UTILIZE SUMMER TRAINING

#### COST

The initial cost of creating a presentation on free community college is about eight hours of employee time to create a general presentation for all free community college states and two hours of time per state with free community college to personalize the presentation. Finally, it would take about three hours for presenters to prepare and give the presentation at each partner institution, eight partners across four states in total. The total number of necessary hours would be about forty and each hour is valued at \$35 an hour based on the estimated value of an hour of advisor time ("The Economic Advantage," n.d.). The total initial cost would be \$1,400 of employee time.

In additional years, the presentation would need to be updated to account for changes in policy and it would need to be presented to the new group of advisors. Each additional year would require about thirty employee hours or about \$1,050 of employee time. The cost of materials would be negligible in this alternative give that employees likely already have access to PowerPoint.

The initial cost and annual cost are both low in comparison to the other alternatives since this option does not require physical materials. **Alternative one receives a 5 on cost.**

#### EFFECTIVENESS

If executed well, a presentation can be an effective way to spread information, but people tend to forget the information quickly. The average person only remembers 50% the information in a presentation immediately after the presentation ends and they only remember 25% of the information eight to twelve hours later (Wolff & Marsnik, 1993). The advisors would need to not only remember the information on free community college months later and further act on that information. Additionally, learning the information once is not a consistent reminder to be aware of the challenges of under-match that can be caused by free community college programs. A presentation is an indirect way of addressing the issue of under-match.

Creating a presentation will help get information to advisors about free community college, but that information is unlikely to be remembered or acted upon long-term. **Alternative one receives a 2 on effectiveness.**

---

#### ADMINISTRATIVE OPERABILITY

Adding a presentation on free community college research and risk of under-match to the advisor's onboarding training would be relatively simple. It would require time to create the presentation based on current research and state-specific information, but since the advisors receive summer training there is already a structure to use for implementation. The presentation would require annual upkeep to incorporate new information either on free community college in general or on state-specific changes to the programs.

This alternative could easily be incorporated into summer training but would require some upkeep. **Alternative one receives a 3 on administrative operability.**

---

#### TOTAL SCORE: 10/15 POINTS

Alternative one has the lowest initial and annual costs but is not expected to be a consistent reminder to the advisors to be looking out for and speaking with the students most likely to under-match with free community college. It would take some time and effort to create the presentation and would require updates on an annual basis.

#### ALTERNATIVE TWO: MATCH SHEETS FOR ADVISORS

---

##### COST

The initial cost of creating updated match sheets for states with free community college is about five hours per state with free community college. The total of twenty hours of employee time valued at \$35 an hour is about \$700 in employee time. The cost of printing the sheets is about \$0.08 cents per sheet and CAC serves 238 schools in free community college states with an average of 188 seniors per school ("Average public school size," n.d.; "The Cost Per Page of Printing," n.d.; "Where We Work," n.d.). The total printing cost is about \$3,600 annually. The first year total cost is about \$4,300. The printing costs would stay the same in the following years and sheets would rarely need to be updated. Updates for the four states would be minimal and cost about ten hours of employee time or \$350. The total cost for additional years is about \$3,950.

The initial cost and annual cost are both largely driven by printing costs, which will likely be spread out over many schools. **Alternative two receives a 3 on cost.**

---

##### EFFECTIVENESS

Match sheets directly address the issue of under-match by building a reminder into a resource that is already being used in at least one state. If advisors are not already using match sheets, they likely have similar resources that could be adjusted to include free community college. Match sheets would serve as a consistent reminder if advisors incorporate them into their practices because they would encourage discussion about when the program may be a good decision for students and when they may be better served to try to attend a four-year college. The sheets would help students identify whether free community college programs would be an appropriate consideration match-wise, based on their own academic markers. There is evidence that thoughtfully designed resources can help individuals to better process information and make decisions (Thaler & Sunstein, 2009). Utilizing this approach would allow students to identify where they are best matched on the sheet and encourage students to have conversations on college based on where they are best matched.

The match sheets would be an effective way of sharing information with students and consistently reminding advisors to have conversations with their students about match.

**Alternative two receives a 4 on effectiveness.**

---

#### ADMINISTRATIVE OPERABILITY

Currently, some advisors are already using match sheets or similar materials to help students to see which schools might be most appropriate based on test scores and GPA. Since advisors are using these materials and others, adding information on free community college for students who are matched with community college would be a relatively simple process and the advisors would be comfortable with the materials. The sheets would require little upkeep since average test scores and GPA for each college does not change drastically year to year.

The match sheets would be simple to implement and require little upkeep. **Alternative two receives a 5 on administrative operability.**

---

#### TOTAL SCORE: 12/15 POINTS

Alternative two has a higher cost of materials than a presentation, but will likely be more effective at consistently reminding advisors to look for students at risk of under-matching. It incorporates materials that are already in use and requires the least amount of upkeep.

#### ALTERNATIVE THREE: BETTER UNDERSTANDING FINANCIAL AID AND LIFETIME EARNINGS

---

##### COST

The initial cost of creating a financial aid sheet that demonstrates potential access to a four-year college and emphasizes potential changes in lifetime earnings consists of employee time



and materials. It is possible that states may already have similar materials that could be easily adjusted to account for changes in lifetime earnings. The initial cost of employee time would be about seven hours per state with free community college or about \$700. Similarly to alternative two, printing costs would be about \$3,600 annually for a total initial cost of \$4,500. These sheets would need to be updated each year to account for new information in the federal financial aid system and for the state system. The expected time for updates would be about four hours per state or sixteen hours. The cost of time for updates would be about \$550 and the total annual cost would be about \$4,150.

The initial cost and annual cost are both largely driven by printing costs, which will likely be spread out over many schools. **Alternative three receives a 2 on cost.**

---

## EFFECTIVENESS

Advisors providing information to students on how financial aid and Pell access relates to free community college and changes in lifetime earnings may help students at risk of under-match to better understand the return on their investment in attending a four-year college. There is evidence that people do change behaviors with access to better information (Huffman, 2009). Exposing students to clear information on financial aid may make them less likely to under-match. This approach focuses on the consequences of under-match by looking at the outcomes associated with attending a four-year college rather than helping students to identify their correct match. The sheets would be a consistent reminder for the advisors to be having conversations with all students about if free community college is right for them, but would be most helpful for the students at risk of under-match.

Increasing information about financial aid and lifetime earnings would be an effective way to for students to gain information about if free community college programs would be a good fit for them and would provide a consistent reminder to advisors to have these conversations.

**Alternative three receives a 4 on effectiveness.**

---

## ADMINISTRATIVE OPERABILITY

This alternative would require creating and maintaining financial aid sheets that emphasize changes in lifetime earnings for relevant states. They would need to be updated on an annual basis to reflect changes in federal, state, and free community college program policies. Advisors likely already use similar information, which would help to incorporate the materials into the advising sessions, but these sheets, in particular, would focus on the return on investment for four-year colleges. They would be used to help students who may be likely to under-match to better understand why a four-year program may be a better choice for them long-term.

Creating the sheets would require time and printing resources. It seems likely that the advisors would be able to incorporate the materials into their advising for students at risk of under-

match, but they would require annual upkeep for each state. **Alternative three receives a 3 on administrative operability.**

---

TOTAL SCORE: 9/15 POINTS

Alternative three is higher cost than alternative one and requires greater annual upkeep than alternative two. It has the potential to be effective but emphasizes the effects of under-match rather than focusing on increasing match directly. The alternative would be realistic to implement but would require annual updates to keep the information current.

## RECOMMENDATION

### USE MATCH SHEETS TO EXPLAIN FREE COMMUNITY COLLEGE PROGRAMS

Overall, the alternative that is the best fit for CAC is to include a note on free community college on college match materials for students. This alternative helps students identify whether they should be considering free community college based on their academic abilities. They may still wish to consider free community college programs, but the sheets will help the advisors and students to recognize cases where students under-match in an effort to help students make an informed decision and spark conversation. Once the sheets are created, they will require minimum upkeep. The cost of printing the sheets will be distributed over a number of schools and in some cases schools may already be printing similar materials that could be incorporated into the match sheets to minimize the strain on school resources. They will consistently serve as a reminder for the advisors to have conversations about free community college as part of their discussion of match and fit with students.

CAC could also consider implementing a combination of alternatives to create a more comprehensive approach to addressing under-match in states with free community college programs. Training on free community college programs during summer onboarding would be a helpful way of increasing the advisors' knowledge of free community college programs in general as well as the specific ways that the policy may cause them to adjust their advising practices. Financial aid sheets or generally discussing the change in lifetime earnings for four-year graduates could help prevent under-match for students who are more focused on the future. CAC's priority should be to adjust match sheets, but with time and resources, multiple interventions could prove to be even more effective.

## IMPLEMENTATION AND NEXT STEPS

Implementing any of these alternatives has the potential to help advisors better serve students in states with free community college programs. In order to best ensure that CAC's efforts are maximized, CAC should explain the purpose of the training or sheets and how they align with CAC's mission to increase college enrollment and completion rates for low-income, first-generation college, and under-represented high school students. It is important to emphasize that the information and changes are to help assess student match in cases where free community college may be tempting from a fit perspective. The goal is not to disregard fit or even minimize it, but for the advisors to help the student fully understand the importance of match and the effect it can have on long-term earnings. Match or preventing under-match should not dictate the decision, but be fully part of the discussion.

If CAC decides to implement one or any of these interventions, they should strongly consider evaluating the effectiveness of the intervention, which could take a variety of forms. If they choose to implement either of the informational sheets, they could conduct surveys and ask advisors after the school year had ended how often they estimate that they used the sheets. Asking if the sheets reminded advisors of the marginal students and how to best advise them would be important information as well as how to improve the sheets in the future. If CAC discovers that the sheets are not a helpful reminder, they would have the opportunity to make adjustments as recommended by the advisors. The ultimate goal is to have a resource that is useful to the advisors so it is important to get their feedback. If CAC decides to include some of the research on free community college in their onboarding process, then they should similarly follow up with advisors to ask what they remember from the presentation and if it was helpful for their advising process.

## APPENDIX 1: BENEFIT COST ANALYSIS

*The following appendix can be consumed as a separate document and is the culmination of a course on Benefit Cost Analysis. Calculations are based on best available evidence but are just one way of examining the return on investments to higher education. This evaluation is best consumed with other sources of evidence in the field. For additional information on methods, contact Babbin@Virginia.edu.*

### **Motivation**

**Incentivizing free community college causes some students to enroll in community college instead of four-year options, which decreases completion rates and lifetime earnings.**

### **Background Research**

One major concern among policymakers is that free community college programs may incentivize students who would have been successful in a four-year setting to enroll in a community college instead and increase their risk of dropping out. When a student attends a school that is below their qualifications it is known as under-matching. A 2009 study of Chicago public schools was the first major examination of college match (Nagaoka et al., 2009). The research team found that college match was most important for high achieving students. Students who qualified for highly selective colleges, but attended less selective schools were less likely to graduate. For example, 97% of students with a 4.0 who attended Northwestern University graduated in 150% of time, but only 29% of their peers who chose to attend Northeastern Illinois University graduated. Match was less important for low-achieving students, who were unlikely to graduate regardless of match quality. While match is still on the forefront a decade later, some researchers are beginning to question if match is truly the issue or if more selective schools are higher quality (Goodman et al., 2017). It is still unclear at this point which is the driver behind completion rates, but both are relevant to free community college debate, especially since it has been shown that attending more selective colleges is most beneficial to low-income students (Dale & Krueger, 2002).

Another relevant study by Goodman, Hurwitz, and Smith used regression discontinuity to assess the effect of attending a four-year public institution in Georgia on completion rates (2017). The students studied gained automatic access to a four-year public college in the state by scoring just above the threshold for automatic admission on their SAT. The students who attended a four-year school through this program were 41% more likely to complete a bachelor's degree than their peers who fell just below the threshold (Goodman et al., 2017). Among low-income students, the four-year graduation rate tripled. On average, the increase in Bachelor's degrees came from students who would have otherwise enrolled in a community college program, but it did not decrease Associate's degrees, meaning that the students who gained access to the four-year system would have likely attended a community college without completing a degree. Most importantly, despite barely qualifying to attend the four-year public institutions, the students who enrolled were as likely to complete a degree as the average for the overall institution. This is relevant to states with free community college program states

because a student whom undermatches will likely take on the average completion rate of the community college, which is lower comparatively.

### *Tennessee Promise*

The following analysis will focus on the state of Tennessee. Starting in 2015, Tennessee began providing free community college to all eligible students in the state through a program called Tennessee Promise (THEC & TSAC, 2019). In order to qualify, students are required to file a FAFSA, meet with an advisor and complete eight hours of community service before enrolling in a community college through Tennessee Promise (“Students,” 2019).

Tennessee Promise uses a last dollar approach to funding tuition. Last dollar programs first apply federal funding through Pell Grants and other state funding to the cost of tuition, and then cover the remaining cost of tuition and fees for the student (THEC & TSAC, 2019). Tennessee Promise covers tuition for a total of five consecutive semesters as 70% of participants require at least one remedial course. The program costs the state \$34 million annually and served 17,000 students in 2017 (THEC & TSAC, 2018, 2019). The program is funded through the Tennessee Promise endowment and lottery proceeds (THEC & TSAC, 2019).

Tennessee is an ideal example of a state with a free community college program because it is the earliest statewide adaption of a free community college program and is considered a model for states considering the policy (Poutre & Voight, 2018). As one of the longest lasting programs, there is considerable data available on students outcomes and programs in comparison to other states.

### **Alternatives**

As students consider their college options they have three main choices. They can attend a community college with the intent of completing an Associate’s degree, they can attend a community college with the intent of transferring to a four-year institution and completing a Bachelor’s degree or they can attend a four-year institution with the intent of completing a Bachelor’s degree. In states with free community college those options remain the same, but attending community college either with or without the intent of transferring becomes relatively more attractive for the students because they are taking on less immediate cost. Each alternative has variable costs to the state and student and greatly influences projected changes in lifetime earnings. For this analysis, the baseline for comparison will be completing a high school degree. Any increases in earnings or changes in costs will be evaluated based on differences from the average status of a high school graduate at that point in time.

### **Social Benefits and Costs of Each Alternative**

The social value of each alternative is comprised of a number of costs and benefits over time as shown below.

Enroll in Free Community College		Enroll in Free Community College and Transfer		Enroll in Four-Year College	
Benefits	Costs	Benefits	Costs	Benefits	Costs
Change in Lifetime Earnings	Tuition	Change in Lifetime Earnings	Tuition	Change in Lifetime Earnings	Tuition
	State Subsidy of Higher Education		State Subsidy of Higher Education		State Subsidy of Higher Education
	Opportunity Cost of Work		Opportunity Cost of Work		Opportunity Cost of Work
	Cost of TN Promise Program Operation		Cost of TN Promise Program Operation		

### Value the Benefits and Costs of Each Alternative

Based on the current research on undermatch and completion rates, the analysis of the possible alternatives for a given student will focus on students who are well-matched with a four-year option but may be tempted to undermatch due to having the option to attend community college for free through Tennessee Promise. The population of interest for CAC is low-income, first-generation college, and underrepresented high school students so, whenever available or applicable, valuations pertaining to those particular populations are used.

#### *Change in Lifetime Earnings*

The greatest benefit of increased education is the change in employment opportunities for the student. College allows access to higher paid positions and the differences in expected earnings grow over time. The value of education is therefore measured as the change in lifetime earnings from a high school degree. Higher levels of education are associated with increases in lifetime earnings. The valuation of lifetime earnings in this analysis assumes consistent work over a forty year period of time for the average person and the methods are based on a lifetime earning analysis performing by the Census in 2002 (Carnevale et al., 2011). The change in lifetime earnings was created by subtracting projected earnings for a high school graduate from the projected earnings at a given level of higher education. For each alternative, expected lifetime earnings at each education level are weighted by completion rates to represent that many people do finish their degree. There are major increases in lifetime earnings when students complete degrees, but since many do not this impacts the expected lifetime earnings for each particular educational pathway.

#### *Tuition*

The most obvious cost of attending college is tuition. The Tennessee Higher Education Commission and Student Assistance Corporation (THEC & TSAC), the organization that runs Tennessee Promise, estimates that the average cost of community college in the state of

Tennessee is \$4,000 annually and the cost of tuition at a four-year public school is \$8,000 annually (THEC & TSAC, 2019). These figures are used in the analysis and are adjusted each year by the number of relevant semesters. The THEC & TSAC also estimate that 70% of students entering community college require a remedial course, therefore 70% of the cost of a semester of tuition is added to the last year of the free community college estimates.

#### *State Subsidy of Higher Education*

States subsidize the cost of higher education for their constituents. In Tennessee, the state appropriates approximately \$8,400 for each full-time enrolled student (State Higher Education Executive Officers Association, 2017). These figures vary by state and year and have generally declined since the Great Recession.

#### *Opportunity Cost of Employment*

Another major cost of attending college, of any kind, is the opportunity cost of not working for multiple years. The wage of a high school graduate is used to value the opportunity cost. The Bureau of Labor Statistics estimates that the average high school graduate earns \$718 and this figure was multiplied by 50 working weeks in a year to establish a value for average income of the high school graduate ("High School Graduates," 2017). It is assumed that students can work part-time or 20 hours a week while in school to defray costs and will work full-time or 40 hours a week during the summers. The difference in expected earnings between the students and non-students is the opportunity cost of employment.

#### *Program Costs*

The final major cost only applies to students who enroll in Tennessee Promise both with or without the intent to transfer to a four-year institution and this is the cost of operating the program. The program costs the state \$34 million annually and gives funding to about 17,000 students (THEC & TSAC, 2019). The average cost of the program per student is \$1,980 annually.

### **Annual Costs and Benefits**

All costs and benefits are shown in 2018 dollars.

<b>Costs and Benefits of Enrolling at a Free Community College without Intention to Transfer</b>					
<b>Costs</b>	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
Tuition	\$2,044	\$4,088	\$3,475		
State Subsidy of Higher Education	\$4,207	\$8,413	\$7,151		
Opportunity Cost of Work	\$6,971	\$13,943	\$9,916		
Cost of Operating TN Promise	\$1,980	\$1,980	\$1,980		



<b>Benefits</b>	<b>Discounted Lump Sum Estimate for Change in Expected Lifetime for 40 Years of Work</b>				
Change in Lifetime Earnings	\$25,376				

<b>Costs and Benefits of Enrolling at a Free Community College with Intention to Transfer</b>					
<b>Costs</b>	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
Tuition	\$2,044	\$4,088	\$6,132	\$8,176	\$8,176
State Subsidy of Higher Education	\$4,206.50	\$8,413	\$8,413	\$8,413	\$8,413.00
Opportunity Cost of Work	\$6,971.28	\$13,943	\$13,943	\$13,943	\$13,942.56
Cost of Operating TN Promise	\$1,980	\$1,980	\$1,980		
<b>Benefits</b>	<b>Discounted Lump Sum Estimate for Change in Expected Lifetime for 40 Years of Work</b>				
Change in Lifetime Earnings	\$88,484				

<b>Costs and Benefits of Enrolling in a Four-Year Institution</b>					
<b>Costs</b>	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
Tuition	\$4,088	\$8,176	\$8,176	\$8,176	\$4,088
State Subsidy of Higher Education	\$4,207	\$8,413	\$8,413	\$8,413	\$4,207
Opportunity Cost of Work	\$6,971	\$13,943	\$13,943	\$13,943	\$6,971
<b>Benefits</b>	<b>Discounted Lump Sum Estimate for Change in Expected Lifetime for 40 Years of Work</b>				
Change in Lifetime Earnings	\$162,419				

## Net Social Benefit

The following are in 2018 dollars and are discounted at 2.5%.

Alternatives	Net Present Value of Benefits	Net Present Value of Costs	Net Social Benefit
Free Community College	\$25,376	\$62,799	-\$37,423
Free CC and Transfer	\$88,484	\$124,823	-\$36,339
Four-Year	\$162,419	\$113,459	\$48,960

The alternative with the lowest cost to society is for a students who is well-matched with a four-year institution to attend one based on the costs of attending and the changes in lifetime earnings. This alternative saves society about \$86,000 per student when compared with the next closest option, enrolling in a free community college without intent to transfer. The costs of each alternative outweigh the benefits, which is not surprising as programs such as free community college, Pell Grants, and other state funding programs exist to help overcome issues of equity in higher education. As a society, we are willing to pay to help others gain access to higher education.

## Sensitivity Analysis

The greatest assumptions in this analysis are the discount rate and the change in lifetime earnings by education level. The discount rate currently being used is 2.5%, which is likely low. The rate was selected since it was already being applied to the change in lifetime earnings estimates. The researchers who produced those estimates used a 2.5% discount rates because it is the rate for long-term government bonds. This decision could drastically impact the estimates, especially in comparison to a 7% discount rate.

Oftentimes interventions surrounding education affect low-income and minority students differently than their peers, but the change in lifetime earnings estimates as well as completion rate information was only available for the average student. It is possible that the final net present value may be different for these subgroups, but it seems unlikely that it would be enough to change the alternative with the highest net present value, attending a four-year institution. Average lifetime earnings also vary greatly by gender, which is beyond the scope of the analysis, but important to note regardless (Carnevale et al., 2011). There is also a range of different estimates of change in lifetime earnings, but the current estimates are modeled based on 2002 Census methods and seem to be similar to other sources.

## Recommendation

Overall, the best option for students who are well-matched with a four-year institution is to attend a four-year institution as it is the alternative with the highest net social benefit. It is to the state's advantage to ensure that students who are well matched with four-year colleges take advantage of those opportunities rather than choosing to attend community college through Tennessee Promise. Promoting college match will not only help the marginal students















































































































to succeed, but it will help manage the costs of the Tennessee Promise program so that they can effectively serve students who are well matched with community college.

It is important to note that there are many reasons why students may choose to take advantage of free community college regardless of the potential differences in lifetime earnings. While this analysis is for the average student, there are cases when students may value location, a particular program, or family differently given their own personal situation. The goal of this analysis is not to recommend that every student or even every student capable of attending a four-year college should do so, but students should fully consider the long-term costs and benefits of the decision in order to make an informed choice.

## APPENDIX 2: MATCH SHEET EXAMPLE FROM VCAC

### Colleges in Virginia: GPA & Test Score Tiers

GPA & ACT/SAT averages of college freshmen class based on information found on institutions' websites and [www.collegeboard.org](http://www.collegeboard.org). The ACT scores reported are the average composite scores. The SAT scores reported are the combined averages of the Evidence Based Reading and Writing and Math sections. These ACT and SAT ranges represent the middle 50% of students admitted to the college or university. Remember that in addition to improving your grades and retaking tests, there are other ways to boost your college applications. Do not be discouraged if your scores are not currently as high as you would like them to be. Continue to work hard!

Open Admissions (No Minimum GPA Requirement)	Avg. GPA: 2.6-2.9 ACT: 15-20 SAT: 780-1000	3.1-3.3 ACT: 19-23 SAT: 1000-1200	3.3-3.5 ACT: 20-25 SAT: 1040-1200	3.5-3.8 ACT: 23-27 SAT: 1160-1300	3.9+ ACT: 28-32 SAT: 1330-1500
All Virginia Community Colleges					
Examples:					
PVCC					
BRCC					
Germania					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					

## WORKS CITED

- Average public school size. (n.d.). Retrieved April 25, 2019, from <https://nces.ed.gov/pubs2001/overview/table05.asp>
- Bettinger, E., Long, B., Oreopoulos, P., & Sanbonmatsu, L. (2011). The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment. *Quarterly Economic Journal*. Retrieved from <https://www.povertyactionlab.org/sites/default/files/publications/834%20Application%20Assistance.pdf>
- Bragg, D. D., & Durham, B. (2012). Perspectives on Access and Equity in the Era of (Community) College Completion. *Community College Review*, 40(2), 106–125. <https://doi.org/10.1177/0091552112444724>
- CAC. (2018). *Postsecondary Trends & Outcomes Report: 2005-2017*.
- Carnevale, A. P., & Rose, S. J. (2015). *THE Economy Goes to College*. 104.
- Carnevale, A. P., Rose, S. J., & Cheah, B. (2011). *The College Payoff: Education, Occupations, Lifetime Earnings*. The Georgetown University Center on Education and the Workforce.
- College Board. (2017). Maximum and Average Pell Grants over Time. Retrieved April 14, 2019, from <https://trends.collegeboard.org/student-aid/figures-tables/maximum-and-average-pell-grants-over-time>

Community College Research Center. (n.d.). Community College FAQs. Retrieved April 6, 2019, from Community College Research Center website:

<https://ccrc.tc.columbia.edu/Community-College-FAQs.html>

Dale, S., & Krueger, A. (2002). Estimating the payoff to attending a more selective college: An application of selection on observables and unobservables. *The Quarterly Journal of Economics*.

Deming, D., & Dynarski, S. (2009). Into College Out of Poverty? Policies to Increase the Postsecondary Attainment of the Poor. *National Bureau of Economic Research*.

Federal Pell Grants. (2019, February 14). Retrieved April 24, 2019, from Federal Student Aid website: [/types/grants-scholarships/pell](#)

Ginder, S. A., Kelly-Reid, J. E., & Mann, F. B. (2018). *Postsecondary Institutions and Cost of Attendance in 2017-18; Degrees and Other Awards Conferred, 2016-17; and 12-Month Enrollment, 2016-17: First Look (Provisional Data)*. NCES 2018-060rev. Retrieved from <https://eric.ed.gov/?id=ED589735>

Goodman, J., Hurwitz, M., & Smith, J. (2017). Access to 4-Year Public Colleges and Degree Completion. *Journal of Labor Economics*.

Handel, S. J. (2014). Under Match and the Community College Student. *Change: The Magazine of Higher Learning*, 46(1), 35–39. <https://doi.org/10.1080/00091383.2014.867211>

Harris. (2018, September 11). America Wakes Up From Its Dream of Free College. *The Atlantic*.

Retrieved from <https://www.theatlantic.com/education/archive/2018/09/where-did-americas-dream-of-free-college-go/569770/>

Harris, D. N., Farmer-Hinton, R., Kim, D., Diamond, J., Reavis, B., Rifelj, K. K., ... Carl, B. (2018).

The promise of free college (and its potential pitfalls). *Brown Center on Education Policy at Brookings*, 38.

High School Graduates. (2017). Retrieved from Bureau of Labor Statistics website:

<https://www.bls.gov/opub/ted/2017/high-school-graduates-who-work-full-time-had-median-weekly-earnings-of-718-in-second-quarter.htm>

Holzer, H. (2015). *Job Market Polarization and U.S. Worker Skills: A Tale of Two Middles*. 10.

How We Track Results. (n.d.). Retrieved April 20, 2019, from College Advising Corps website:

<https://advisingcorps.org/our-impact/>

Huffman, W. E. (2009). Does Information Change Behavior. *OECD World Forum on "Statistics, Knowledge and Policy,"* 9.

Impact Summary. (n.d.). Retrieved April 24, 2019, from College Advising Corps website:

<https://advisingcorps.org/our-impact/>

Jones, T., & Berger, K. (2018). A Promise Fulfilled: A Framework for Equitable Free College Programs. *The Education Trust*, 48.

Labaree, D. F. (1997). Public Goods, Private Goods: The American Struggle over Educational Goals. *American Educational Research Journal*, 34(1), 39.

<https://doi.org/10.2307/1163342>

Martin, E. (2019). *CAC Data*.

Mission & History. (n.d.). Retrieved March 13, 2019, from College Advising Corps website:

<https://advisingcorps.org/our-work/>

Monaghan, D. B., & Attewell, P. (2015). The Community College Route to the Bachelor's Degree.

*Educational Evaluation and Policy Analysis*, 37(1), 70–91.

<https://doi.org/10.3102/0162373714521865>

Nagaoka, J., Roderick, M., & Coca, V. (2009). Barriers to College Attainment: Lessons from Chicago. *Center for American Progress*, 34.

National College Access Network. (2017). *Incorporating Fit and Match into College Advising and Program Data*.

Our Results. (n.d.). Retrieved April 20, 2019, from College Advising Corps website:

<https://advisingcorps.org/our-impact/>

Poutré, A., Rorison, J., & Voight, M. (2017). Limited Means, Limited Options: College Remains Unaffordable for Many Americans. *The Institute for Higher Education Policy*, 20.



Poutre, A., & Voight, M. (2018). Do Tennessee Promise and New York's Excelsior Scholarship Help Students With Limited Means Afford College? *Institute for Higher Education Policy*, 2.

State Higher Education Executive Officers Association. (2017). *SHEF: FY 2017 State Higher Education Finance*. Retrieved from [https://sheeo.org/wp-content/uploads/2019/02/SHEEO\\_SHEF\\_FY2017\\_FINAL-1.pdf](https://sheeo.org/wp-content/uploads/2019/02/SHEEO_SHEF_FY2017_FINAL-1.pdf)

Stone, M. (2016). What Happened When American States Tried Providing Tuition-Free College. *Time*. Retrieved from <http://time.com/4276222/free-college/>

Students. (2019). Retrieved from Tennessee Promise website:  
<http://tnpromise.gov/students.shtml>

Swanson, E., Watson, A., Ritter, G., & Nichols, M. (2016). Promises fulfilled? A systematic review of the impacts of promise programs. *The University of Arkansas, Department of Educational Reform*.

Thaler, R., & Sunstein, C. (2009). *Nudge: Improving Decisions About Health, Wealth, and Happiness*.

The Associated Press. (2019). Free tuition bill for community college in West Virginia. Retrieved April 14, 2019, from <https://www.wtae.com/article/free-tuition-at-community-colleges-in-west-virginia/26752387>

The Cost Per Page of Printing. (n.d.). Retrieved April 25, 2019, from <http://www.officelink-inc.com/costperpageprinting-Blog.html>

The Economic Advantage. (n.d.). Retrieved April 25, 2019, from College Advising Corps website:

<https://advisingcorps.org/goal2025/>

The Pell Divide: How Four-Year Institutions are Failing to Graduate Low- and Moderate-Income Students – Third Way. (2018). Retrieved April 24, 2019, from

<https://www.thirdway.org/report/the-pell-divide-how-four-year-institutions-are-failing-to-graduate-low-and-moderate-income-students>

THEC, & TSAC. (2018). *Tennessee Promise Annual Report*. Retrieved from Tennessee Promise website:

<https://www.tn.gov/content/dam/tn/thec/bureau/research/promise/TN%20Promise%20Report%20-%202018%20-%20Final.pdf>

THEC, & TSAC. (2019). *Tennessee Promise Frequently Asked Questions*. Retrieved from

[https://www.insidehighered.com/sites/default/server\\_files/files/TN%20Promise%20FAQ.pdf](https://www.insidehighered.com/sites/default/server_files/files/TN%20Promise%20FAQ.pdf)

Where We Work. (n.d.). Retrieved March 13, 2019, from College Advising Corps website:

<https://advisingcorps.org/our-work/>

Wolff, F., & Marsnik, N. (1993). *Perceptive Listening* (2nd Edition). Harcourt College Publishers.

Zinshteyn, M. (2019). California's new 'free college' law for community colleges covers more than tuition. Retrieved April 20, 2019, from EdSource website:

<https://edsource.org/2019/californias-new-free-college-law-for-community-colleges-covers-more-than-tuition/608612>

