

Text messaging and peer mentoring programs are shown to be helpful and cost-effective strategies for addressing the phenomenon of “summer melt” observed among low-income college-intending students.

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The not-so-lazy days of summer: Experimental interventions to increase college entry among low-income high school graduates

Benjamin L. Castleman, Lindsay C. Page

THE SUMMER AFTER high school graduation occupies a treasured place in American culture. Popular movies and music portray high school seniors whiling away the final days of the academic year in dreamy expectation of lazy days on the beach and coming-of-age road trips to unfamiliar destinations. If students feel any anxiety at all, it is brought about by the nervous anticipation of first phone calls (or Facebook chats) with soon-to-be college roommates or by the daunting task of choosing the duvet that best matches the overall dorm room décor.

But does this conception of the post-high school summer accurately capture the experience of low-income, college-intending high school graduates? Scholars have documented the phenomenon of “summer fadeout,” where children, especially those from families with low incomes, suffer achievement declines between the end of one school year and the start of the next.¹ Nevertheless, prevailing psychological and sociological theories of

college choice and retention neglect to consider the possibility that students may change their postsecondary plans during the summer after high school.²

After students have been accepted to and have decided to attend a particular college, however, they must complete a complicated array of tasks in order to successfully matriculate. For instance, students must interpret their financial aid award, identify any financial gap between their aid package and the cost of attendance, and make a plan for how they will acquire the necessary funds to fill this gap. Students also typically need to complete a number of administrative tasks, such as registering for and attending freshman orientation, registering for and completing academic placement tests, and completing housing forms.³ Such tasks may be particularly onerous for students from disadvantaged backgrounds who are often isolated from professional guidance and support: low-income students no longer have access to high school counselors, have yet to engage with supports at their college, and typically cannot afford private college consulting.⁴ And whereas middle- and upper-income parents tend to be heavily involved in the college process, lower-income parents may lack experience with the college process, and may be ill-equipped to provide guidance. Further, structural realities, such as the need for lower-income parents to work nonstandard hours or multiple jobs, may create barriers to regular routines at home and parents' ability to engage with their students on issues of college going.⁵ Additionally, low-income parents may not believe their involvement would positively influence their children, or they may question whether the colleges allow for their involvement in the process.⁶

As a result, students who have already overcome many barriers to successful matriculation and appear to be on track for fall college matriculation at the time of high school graduation may nonetheless fail to enroll, a phenomenon to which we refer as "summer melt." Several studies document a substantial amount of summer attrition, up to 40 percent, among students who had been accepted to and intended to enroll in college as of high school graduation.⁷ Encouragingly, we have also generated experimental evidence to

illustrate that high school graduates' enrollment decisions are quite responsive to additional outreach and support during the post-high school summer. This outreach ranged from having school counselors or peer mentors proactively reach out to students during the summer to offer individualized guidance and assistance to a text messaging campaign in which students received personalized reminders of important tasks to complete at their intended institution. The interventions were comparatively low cost, from \$7 to \$200 per student, and increased college enrollment by 3–8 percentage points. By comparison, the financial aid literature has typically found that \$1,000 in additional grant aid increases enrollment by 3–6 percentage points.⁸

In the remainder of this chapter, we first examine in greater detail why high school graduates who have surmounted many obstacles to college attainment may experience summer melt. We draw on various theoretical foundations to explain the high rates of summer attrition we have observed across settings. We then describe each of the interventions we have implemented to mitigate summer attrition. We focus on the behavioral mechanisms that each intervention is designed to address and highlight the main findings from each experiment.

Possible causes of summer melt

A number of factors may contribute to the failure of highly college-intending students to successfully matriculate during the fall following high school graduation. These factors relate to barriers to information as well as the complexity of college-related information that students and their families must process, aspects of adolescent development that are coincident to this period of college transition, and emerging theories in the field of behavioral economics about how individuals make decisions.

We begin by considering issues related to the complexity of college and financial aid information. Students and their families may have difficulty over the summer accessing, digesting, or completing

various paperwork, such as supplementary loan applications and academic placement test registrations. A second consideration relates to how students respond behaviorally to the range of tasks they are expected to complete, particularly since they frequently lack access to professional guidance or support during the summer months. For instance, students may put off tasks that are particularly onerous or complex or struggle to keep track of deadlines associated with various responsibilities.

In addition, students may fail to realize their college intentions because they lack sufficient information about college costs and their options for financing postsecondary education, and are therefore unprepared to pay the tuition bill they receive midsummer. Several studies have documented that students and families from disadvantaged backgrounds often either struggle to estimate the cost of college tuition at all or substantially overestimate actual tuition expenses.⁹ Specific to the context of the summer after high school graduation, students may lack information about their options for addressing financial gaps between their tuition bills and financial aid packages. Related to the credit constraint problem, students may be unaware that their parents can apply for supplemental loans from the federal government and that if parents' loan applications are rejected because of poor credit, the amount the student can borrow directly from the government automatically increases. Students may also be unaware that most colleges offer tuition payment plans that allow them to spread payments for the fall semester tuition bill over several months.¹⁰

An even more basic problem is that students from disadvantaged backgrounds may fail even to access their tuition bill or other important college information during the summer after high school. In recent years, many colleges have turned to web portals (for example, wolverineaccess.umich.edu) to disseminate key information to students. Students who are unfamiliar with the mechanics of these portals or who lack reliable Internet access over the summer may not receive many of the forms they are expected to complete in a timely fashion.¹¹

Even among students who are able to access required college information over the summer, the complexity of paperwork students receive may impede their ability to complete all of the tasks necessary for successful matriculation. A number of studies document how high informational costs in the form of complexity can lead students to make suboptimal decisions about whether to apply for college or financial aid.¹² In the context of the summer after high school, students may struggle, for example, to distinguish grant aid from loan assistance on their financial aid award letters. They or their parents may be confused by the terms associated with supplemental loans they are considering, and students may be unsure about which other tasks, such as placement tests, they have to complete before versus during orientation.

A related point is that students may have difficulty visualizing the academic and social dimensions of college life—particularly if they have not had the opportunity to go on a campus visit. Aspiring first-generation college students, in particular, may lack a point of reference for the college experience; they do not know whether they will enjoy and thrive in the collegiate classroom; whether they will form new friendships; whether going to college will in fact result in a well-paying job. Faced with this uncertainty, students may be hesitant to relinquish the stability of their current lifestyle.¹³

A second set of considerations relates to the phase of development that coincides with the transition to postsecondary education and the implications that this has for the way that students respond behaviorally to college and financial aid tasks during the summer after high school. During the time period that students are engaged in the college choice process, they are in a phase of extensive cognitive development that impacts their reasoning, self-awareness, and ability to make decisions.¹⁴ Neurological systems that respond to immediate stimulation are at their peak activity, yet brain systems required for self-regulation are still in development. As a result, adolescents are more impulsive, less likely to consider the long-term consequences of their present actions, and more likely to put off onerous tasks in favor of more pleasurable pursuits.¹⁵ Given the cognitive transformations that adolescents experience in their

late teens, when their organization, planning, and self-regulation capacities are in active development, completing tasks such as intricate college and financial aid processes that require substantial cognitive effort are likely to be particularly challenging for adolescents.

The complexity of decisions students face may also create considerable stress, undermining their confidence to make choices regarding their future.¹⁶ This cognitive load may be particularly daunting for students from disadvantaged backgrounds who have to devote their time and energy to addressing immediate stressors, like supporting their families financially or dealing with neighborhood violence.¹⁷ Faced with substantial time and cognitive burdens associated with accessing, digesting, and completing required college tasks over the summer, students may instead opt to put off, or abandon entirely, the tasks required for matriculation—particularly if the alternative activity is something more enticing, like spending time with friends. Individuals who highly discount future benefits relative to present costs are particularly likely to forego investments that require navigation of complex information and choices.¹⁸

A final set of considerations relates to students behavioral responses to required summer tasks. Students may fail to successfully matriculate in the fall because they fail to meet with key deadlines throughout the summer. Karlan, McConnell, Mullainathan, and Zinman develop a model in which limited attention can interfere with individuals' ability to moderate present consumption in anticipation of desired future actions or expenditures.¹⁹ The authors posit that regular reminders should mitigate this “attentional failure” and help individuals smooth savings in preparation for a desired future expenditure. In many aspects of their academic lives, students are accustomed to such regular reminders. Throughout high school teachers provide students with frequent reminders of work they need to complete. In college, students receive syllabi detailing what to read each week and when assignments are due. High school students, even those from disadvantaged backgrounds, are exposed to an increasing range of school- and community-based

efforts to increase college going. For instance, 37 states participate in College Goal Sunday, which pairs students and families with volunteers to help in applying for college or financial aid. Students from middle- and upper-class backgrounds receive frequent prompts from their parents through the college application and choice processes (see, for example, the November 30th, 2009 cover story of *Time Magazine*: “The Case Against Over-Parenting”).²⁰ In contrast, for low-income and first-generation college students, particularly those intending to enroll at large public institutions, summer may be a uniquely “nudge”-free time.²¹ Students may not receive any personalized outreach reminding them of required tasks.²² In the absence of these nudges, students may miss important deadlines, such as registering for orientation, or have too little time at the end of summer to complete everything that is required of them.

Mitigating summer melt

Research from economics and psychology, among other disciplines, thus illustrates multiple factors that may contribute to why strongly college-intending high school graduates may nonetheless fail to realize their college aspirations. Fortunately, this research also informs how interventions could be designed to mitigate summer attrition and increase college access among students from disadvantaged backgrounds. Specifically, the literature suggests that low-income students would benefit from additional support to interpret and complete financial tasks and required college paperwork. This support could come from a professional counselor or a peer mentor. Students could additionally benefit from near-age peer support, since peers are uniquely positioned to provide first-hand, credible perspective and experience on overcoming summer barriers to enrollment. Finally, students could benefit from strategies that simplify and personalize the complex set of information that students need to digest and to which they need to respond in order to successfully matriculate at their intended

institution. We now turn to describing in greater detail three interventions we have implemented and assessed in order to understand the potential benefit of these types of summertime college-going supports.

In the first set of interventions, we investigated the impact of having school counselors or financial aid advisors reach out to college-intending high school graduates to offer additional support with college-related tasks. There are a variety of mechanisms by which the offer of counselor assistance could increase the probability of students' on-time transition to college. Counselors may be able to persuade students of the value of making short-term investments in higher education, given the longer-term benefits they are likely to realize. Counseling also should help students overcome the complexities in required paperwork they receive from their intended college. Finally, counselors may be able to help students devote time to task completion incrementally throughout the summer and therefore increase the probability that they are able to enroll.

During the summer of 2011, we collaborated with two educational agencies, uAspire and Fulton County Schools (FCS), to conduct summer counseling interventions.^{23,24} uAspire is a Boston-based, nonprofit organization that provides college financial aid advising and scholarships to high school students.²⁵ FCS is a large urban school district in the metro-Atlanta area of Georgia with more than 90,000 students in 100 schools.

In each site, we randomly selected treatment group students to receive proactive outreach from a uAspire advisor or an FCS counselor over the course of the summer, while the control group students did not receive outreach.²⁶ Counselors made multiple attempts to contact each student in the treatment group to offer support and used a variety of communication methods. During the first in-person meeting, counselors completed a college-assessment protocol that we designed to achieve three purposes. First, counselors reviewed each student's financial aid award letter and provided guidance based on the student's level of unmet financial need. Second, counselors briefed the student on the

calendar of key summer deadlines at the college the student planned to attend and helped the student understand and complete paperwork the student had already received from that college. Finally, the counselor assessed whether the student faced social or emotional barriers to fall college enrollment.²⁷

At the conclusion of the assessment meeting, counselors helped students create a list of tasks required in order to start college that fall. Throughout the summer, counselors followed up with students individually to check on their progress with these tasks. Subsequent to the initial assessment meeting, much of the communication between counselors and students happened via phone, email, and text, though counselors also conducted in-person follow-up meetings with students when they felt it important to do so.

Our results indicate that college-intending high school graduates are responsive to the offer of summer counseling. Approximately half of the treatment group students in Boston met with an advisor at least once during the summer, compared with only 2 percent of students in the control group. The overall rate of counselor interaction in FCS was lower, close to one-third of treatment group students, but there were substantial differences in take-up by whether students qualified for free- or reduced-price lunch (FRL). Whereas only a quarter of non-FRL students in the treatment group interacted with an FCS counselor over the summer, over half of FRL students did so.

Further, the offer of summer counseling support had a strong, positive impact on both college enrollment and persistence for students overall in Boston and a particularly pronounced impact for FRL-eligible students in FCS. Students in Boston who were offered a few hours of additional counseling assistance were over 5 percentage points more likely to enroll in the fall semester following high school compared to students who were not offered additional assistance. In Fulton County, the impact of summer counseling on fall enrollment was even greater for FRL students, for whom the summer outreach improved fall college enrollment by almost 8 percentage points.

Even more pronounced were the impacts on persistence: in Boston, students who were offered additional summer counseling were almost 7 percentage points more likely to persist into the spring of freshman year in college and almost 9 percentage points more likely to persist into the fall semester of sophomore year in college than students who were not offered assistance.²⁸ These persistence impacts are particularly important. One potential criticism of offering students additional support after high school graduation is that students who struggle to access and complete required paperwork during the summer are unlikely to possess the skills, either academic or problem solving, necessary for success in the classroom and perseverance in college. These persistence impacts suggest that the challenges students encounter over the summer may not relate directly to their ability to succeed in college.

Given the positive effects we observe, an important question is what mechanisms are driving these impacts? Based on a set of follow-up focus groups and interviews with counselors and students in Boston on which we collaborated with Karen Arnold of Boston College, several themes emerged: A key part of the story is that advisors helped students reduce college costs to the point that they could afford to enroll. Counselors helped students to qualify for aid if they had not already, to waive costs where possible (for example, waiving their college's health insurance plan in favor of their parents' coverage), to sign up for tuition payment plans to spread payments over several months, and, if necessary, to select a more affordable college to attend. Helping students access information appears to have been another important element of the summer support. For instance, many counselors reported helping students access and navigate the college web portals through which colleges now disseminate substantial information over the summer, but with which students were often unfamiliar. Finally, an important part of the summer work is providing students with nudges to complete required tasks. As one counselor said, they were essentially filling in for what middle-class parents would do with their own children—providing the necessary guidance and reminders

that students' parents were unable to offer for lack of first-hand experience.

In reflecting on these counselor-led interventions and how they might be replicated and expanded, several questions emerged about how to most effectively provide students with support during this time period. One question is to whose offer of help students are most likely to respond. During summer 2011, we had worked with high school counselors and community-based financial aid advisors. Might college-aged peer mentors from the same high schools who can share first-hand experiences of how they navigated summer obstacles and managed to succeed in college be as or more effective in providing outreach and support? On the one hand, peer mentors could potentially be more effective at making contact with students; on the other hand, they may not have the same impact on whether students actually enrolled, for lack of sufficient training or counseling expertise. Finally, how important is personal outreach (for example, a phone call from a counselor) versus personalized outreach? Counselors reported investing considerable time just trying to reach students and get them in the door to meet. What if we could automate and personalize outreach and, at the same time, share information specific to students' intended college?

In summer 2012, we collaborated with Laura Owen at Johns Hopkins University, Bridget Terry Long at Harvard University, and Eric Bettinger at Stanford University, to implement a broader set of college-going interventions through which we launched three follow-up randomized trials. Through one intervention, students were enrolled in a text message campaign through which they received personalized reminders of required college tasks and the offer of one-on-one help from a school counselor. Through another intervention, we hired peer mentors to reach out to students, to offer them help, first-hand perspective and encouragement, and to connect them to professional staff if they needed additional assistance. Finally, in the third intervention, we facilitated a partnership between a large southwestern urban school district and the university where the majority of college-bound graduates

from the district enroll, to investigate whether outreach from the high school or college side differentially impacts whether students enroll. In sum, we worked with eight large urban districts across the country, with a total experimental sample of approximately 12,500 students. Our analyses of the APS-UNM intervention are still ongoing, so we focus in the remainder of the paper on the design of and results from the text message and peer mentor interventions.²⁹

The potential of text messaging to deliver personalized college information

For several reasons, text messaging is a promising means of delivering personalized college information to students and facilitating connections to school counselors. Texting is the predominant means by which young people communicate. Whereas only 6 percent of teens exchange emails and 39 percent talk via mobile phones, 63 percent send texts on a daily basis.³⁰ Moreover, a text campaign may increase the efficiency of school counselors' time. With a text platform, message delivery can be *automated* and *personalized* to individual students and their postsecondary plans, eliminating the need for counselors to invest substantial time in conducting outreach and instead allowing them to focus efforts on providing guidance where needed. Finally, both public health and development economics research reveals positive impacts of text messaging campaigns on desired outcomes, such as whether individuals contribute regularly to a savings account or get a flu vaccination.³¹

Personalized text messages could positively impact successful fall matriculation among college-intending students via several possible mechanisms. As noted above, text messaging may efficiently connect students to school counselors who can provide help to address summer obstacles to enrollment. Enabling students to request assistance via text message minimizes several potential barriers to help-seeking. For instance, in under-resourced schools

where counselors have large caseloads and minimal time to focus on college planning, high school graduates may have had limited personal relationships with counselors.³² Given this lack of personal connection, recent graduates may not view their high school counselor as an obvious source of support or may be inhibited more generally from initiating contact. Receiving proactive outreach and taking up the offer of assistance by responding to a text message, in contrast, may require considerably less interpersonal effort.

Personalized text messages may also improve rates of college matriculation by informing students of required summer tasks about which they were previously unaware and/or by simplifying the steps required to complete these tasks. Particularly as colleges have favored online dissemination of information, students may struggle to comprehensively identify the tasks and associated deadlines required to successfully matriculate. A text message campaign can be implemented to provide students with institution- and task-specific information together with links to web pages relevant to completing a given task (for example, registering for orientation).

Finally, the text outreach may positively impact college outcomes simply by nudging students to complete required tasks by the relevant deadline. In this way, personalized messaging may effectively turn adolescents' greatest liability—their impulsiveness—into an asset.³³ By providing simplified information and college- and task-specific links, each message allows completion of required steps in the moment, before students' attention is diverted elsewhere.

The potential of peer mentoring to mitigate summer attrition

Peer mentoring is another promising strategy to increase college going among low-income high school graduates. First, high school graduates may be more responsive to summer outreach from peers than from adults who make similar efforts. Peer mentors are also

more likely to be facile with modes of communication that are common among recent high school graduates, and peer mentors may be uniquely effective at positively altering students' perceptions of social norms regarding college. Near-age peer mentors who are from similar backgrounds, who graduated from proximate high schools, and who are currently thriving in college may be uniquely poised to shift recent high school graduates' conceptions about who goes to and succeeds in college. To the extent that this change in perspective reduces the psychic costs associated with college, students may be more likely to complete required summer tasks and/or seek out individualized assistance when needed in order to matriculate.

Peer mentors may also increase the probability that students matriculate by concretizing the potential benefits of college. Time and travel costs may prevent students from visiting their intended college campus, and first-generation college students who received little prior college counseling may struggle to visualize college life. As a result, students may have less access to information about the benefits of college than traditional human capital investment models would posit. Students may accordingly be averse to forego current situations in favor of an unfamiliar environment.³⁴ Therefore, peer mentors may help to solidify students' perceptions of what college has to offer. Especially when peer mentors are from similar age, racial/ethnic, and gender groups, students may find their perspective and experience particularly salient.³⁵

Sites and intervention design

During the summer of 2012, we collaborated with the Dallas Independent School District (Dallas ISD), uAspire, and Mastery Charter Schools, a network of charter schools in the Philadelphia metropolitan area (Mastery) to conduct the text message and peer mentor interventions. We implemented the text message intervention with both Dallas and uAspire and the peer mentor

intervention with uAspire and Mastery. In addition to its Boston location, uAspire operates in the Massachusetts school districts of Lawrence and Springfield. We worked with all three sites for the text message and peer mentor interventions. Dallas ISD is a large, urban school district, serving approximately 158,000 students across 227 high schools, and Mastery Charter Schools serve approximately 8,000 students in grades kindergarten through 12.

The core of the text campaign was a series of 8–10 text messages that reminded students and their parents of key tasks to complete for their intended college and that offered recipients the opportunity to meet with a school counselor from their district if they needed additional assistance.³⁶ More specifically, the messages reminded students to: log on to their intended college’s web portal (for example, wolverineaccess.umich.edu) to access important paperwork, to register for orientation and placement tests, to complete housing forms, and to sign up for or waive health insurance, if relevant. The messages also offered students the opportunity to obtain help in completing the FAFSA, if they had not done so already, and help in interpreting their financial aid award letter and tuition bill. Most messages included web links that allowed students to complete tasks directly from their phone (if they had a smart phone and a data plan).³⁷ The text messages were delivered between early July and mid-August in approximately five-day intervals.

The peer mentor intervention built largely on the counselor-led outreach interventions described above. The primary difference with the peer mentor intervention was that college students who had graduated from public high schools in each uAspire site or from a Mastery high school were conducting the initial outreach to students and providing the first level of support and guidance, with supervision from a professional counselor.

Peer mentors had several goals in their initial outreach to students. Their primary task was to make contact with students and assess their readiness for fall college matriculation. Some of the core topics that peer mentors covered in their initial conversation were

whether the student was still planning to enroll in college, and if so, at the college indicated at the end of senior year, had completed the FAFSA, had received and reviewed a financial aid award letter, and had registered for orientation and placement tests. Following this initial assessment, peer mentors held in-person meetings or follow-up phone conversations to assist with issues that arose during the initial conversations. For instance, peer mentors helped students interpret their financial aid award letters and explore tuition payment plan options. Peer mentors also reviewed the briefing documents for the colleges and universities frequently attended by graduates at participating sites and helped students identify tasks they had yet to complete.

Peer mentors did not, however, directly support tasks that required students to provide financial information about themselves or their families, such as completing the FAFSA or applying for supplementary loans. For these tasks as well as other areas in which the peer mentor did not feel suitably equipped to comprehensively provide support, peer mentors referred students to a supervising counselor.

The text messaging and peer mentor outreach campaigns both had a positive impact on whether college-intending high school graduates enrolled in college. Text outreach increased enrollment in two-year institutions by over 3 percentage points, while peer mentor outreach increased four-year enrollment by nearly 5 percentage points. These overall results mask considerable impact heterogeneity which begins to shed light on for whom and the conditions under which these types of interventions may be particularly beneficial. The impacts in Dallas, for example, were concentrated among students who qualified for FRL and students who fell in the middle of the achievement distribution as measured by GPA and standardized test performance. In Lawrence and Springfield, Massachusetts, students in the text message treatment group were 7 percentage points more likely to enroll in college, with this impact equally divided between enrollment at four-year and two-year institutions. The peer mentor impacts in Lawrence and Springfield were largest among males, and across the uAspire

sites, both text and peer mentor impacts were largest among students who began the summer without specifically articulated postsecondary plans.

Taken collectively, these results suggest that the text intervention was most impactful for students who plausibly had less access to college and financial aid information, either because they were from communities with low educational attainment and few college-going supports, or because they themselves were from socioeconomically disadvantaged families. Both the text and peer mentor interventions had pronounced effects on students who began the summer with less-solidified college plans, and who therefore could have benefited from additional guidance of tasks to complete. Finally, the peer mentor intervention was quite effective for male students; one reason for this may be that student-mentor matching was largely done along gender lines. Particularly given broad concerns about gender disparities in educational achievement and attainment, the peer mentor results offer a promising approach for increasing college access among males from disadvantaged backgrounds.

Perhaps the most striking feature of the interventions, and the text messaging intervention, in particular, is their cost effectiveness. Including the cost of up-front system design and the per-message delivery charges, the total messaging cost per student in the Dallas and uAspire treatment groups was approximately \$2, or roughly \$5,000 across both sites. The other primary expense was compensation for counselors to staff the summer intervention, which raised the per-student cost of the intervention to a mere \$7. The costs of the peer mentor intervention were primarily hourly wages to the peer mentors themselves and salary for supervising advisors, which totaled approximately \$80 per student. This is more similar in cost to counselor-led interventions. Given the magnitude of the impacts we observe per dollar spent, both interventions appear considerably more cost effective than other strategies to increase college access among students from disadvantaged backgrounds (for example, giving students additional grant aid).

Conclusion

In sum, college-intending, low-income high school graduates face a host of informational, financial, and other barriers to enrollment that may prevent them from successfully matriculating. Encouragingly, the experimental evidence that we have generated indicates that for these same students, proactive outreach by counselors, peer mentors, or even via text message during this period can lead to substantial improvements in rates of on-time college graduation. These findings have significant implications for policy, practice, and research. Gaps in college enrollment and success by socioeconomic status have persisted for decades and have widened among recent cohorts.³⁸ School districts are under mounting pressure to improve college-going rates among underrepresented populations, yet they often have limited resources with which to invest in initiatives targeted to these outcomes. At a time when the private and social returns to a college education are particularly high, yet district, state, and federal budgets are especially lean, we conclude that proactively reaching out to students over the summer to provide them with information, encouragement, and individualized assistance represents a cost-effective approach to increasing college access among low-income students who aspire to further their education.

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23. These interventions were based on a successful pilot experiment we ran in Providence, RI, in summer 2008. For more information on this pilot, see Castleman et al. (2012a).

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25. More information about uAspire can be found at www.uaspireusa.org

26. In Boston, treatment and control group students alike were told prior to the start of the intervention that individualized counseling would be available from uAspire over the summer. In FCS, students were not made

aware of the program prior to its commencement. In either site, control group students who initiated contact received the same level of support as those in the treatment group.

27. Materials we developed to guide counselors' interactions with students are available upon request.

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BENJAMIN L. CASTLEMAN is an assistant professor of education and public policy at the University of Virginia.

LINDSAY C. PAGE is a research assistant professor at the University of Pittsburgh School of Education.