Abstract Title Page

Title: Summer Outreach with Near-Age Peer Mentors: A Randomized Experiment to Improve the Transition to College

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Background/Context:
The overwhelming majority of ninth graders expect to attend college, yet the rate at which U.S. public high school seniors successfully matriculate to postsecondary institutions is problematically low, especially among students with limited economic and social resources (Authors, 2007; Authors, 1999). While many middle class students rely on family and counselors for assistance in making academic, educational, and career decisions, students with limited family resources, including those in households where parents did not attend college, often attend high schools with inadequate guidance resources (McDonough, 1997; McClafferty, McDonough, & Nunez, 2002). These students often lack access to role models and experiences that can help promote the transition to postsecondary education (Rosenbaum, 2001). Even if students successfully navigate the college-application and selection process during high school, the summer between their graduation and the start of college has been found to be a vulnerable time in which students intending to enroll in college, fail to actually matriculate (Authors, 2009; Authors, 2012). This phenomenon is commonly referred to as "summer melt." This paper presents results from a randomized study that is part of a larger, quasi-experimental intervention, The College Ambition Program (CAP). The embedded study targeted graduating high school students to receive additional support through the use of near-age peer mentoring during the summer prior to beginning college.

Research Questions:
This study will examine students' matriculation to their planned postsecondary institutions. Although students leave high school stating their plans to continue their education, some lack the information and strategies to successfully navigate a successful transition to college. This study expects to contribute to existing theoretical and empirical research on the attrition trends for students expecting to continue on to college during the summer. Specifically, what are the effects of near-age mentor outreach during the summer on students' college enrollment in the fall? What is the effect of the intervention on students fulfilling their originally stated college goals and the type of institution a student enrolls? Given that similar studies have found positive effects for this type of intervention during the summer and taking advantage of the larger on-going intervention with multiple years of data on students in the CAP treatment schools, we also examine what type of student is more likely to take advantage of this type of support over the summer.

Setting:
The larger study, CAP, is a whole-school, quasi-experimental design that operated in four public secondary schools (two urban and two rural) in Central Michigan. In addition to the intervention schools, there were four matched comparison group schools. All schools also have lower than average college enrollment rates when compared with the state average and with other schools with similar student populations on measures of race and ethnicity, socioeconomic status, and in similar geographic regions. Graduating 12^{th} grade students in all eight schools participated in the randomized summer outreach study.

Population:
The four urban high schools serve a racially diverse student population (each are around 40 percent white, 35 percent black, 20 percent Hispanic, and 5 percent other ethnicities). The sizes of the schools vary from around 700 to 1,200 students. The rural high schools serve between 300

and 600 students, nearly all of whom are white. The urban schools serve a large percentage of economically disadvantaged students, with 70 percent of their students eligible for free and reduced lunch. At the rural school, around 30 percent of the students are eligible for free and reduced lunch. All treatment schools have a substantial number of students who would be the first in their family to go to college.

Intervention:
The intervention in this study is near-age peer mentoring for students who have just completed high school and are preparing to enroll in a postsecondary institution in the fall. Mentors were recruited from a pool of undergraduate and graduate students at a local tier-one research university who were working on campus during the summer. These mentors reached out to students via, text, phone, email, and Facebook, and offered to provide several services:

1. *Course Counseling and Advising:* Summer course counseling tends to focus on the set of courses students should register for at their postsecondary institution. This includes discussing possible career and major interests, as well as fulfilling college and university prerequisite requirements. Often, mentors are also asked about placement exams in math and foreign language, a common feature of many postsecondary schools.
2. *Financial Aid Assistance:* The mentors worked with students to understand their financial aid situation. The mentors worked with students to identify how much money the family and student actually need to begin college in the fall, what forms still needed to be completed, how to plan for living arrangements, how to register for classes, and how to seek employment—especially work-study opportunities. Mentors over the summer specifically focused on students with outstanding financial obligations and helped them develop a plan for meeting those obligations with loans, work study, etc.

All students in the sample were contacted at least twice (email and phone) by summer mentors who offered their support in the college enrollment process. If students expressed an interest in help from mentors, they then took part in one or more follow-up meetings with their mentor, either in person or over the phone, Skype, etc. Prior to initial outreach, all mentors were trained for one hour by CAP staff in basic strategies for youth development and mentoring, and provided with a series of templates and roadmaps to guide conversations on pertinent topics related to preparing for college.

Research Design:
This study is best described as a pretest, posttest, experimental design. Graduating twelfth grade students at the eight high schools in the CAP study who had indicated their postsecondary plans were randomized into the treatment or control conditions. Due to the different sizes of each high school and the available resources to conduct the intervention, 40 percent of each graduating class was assigned to the treatment and 60 percent was assigned to the control (see Table 1). This kept the mentor caseload of students to less than forty students per mentor. A near-age mentor would attempt to contact all students assigned to their caseload from the treatment group.

Data Collection and Analysis:
The three primary sources of data are a (1) senior exit survey that was given to all graduating 12^{th} grade students prior to the start of the randomized study, (2) mentor contact logs that were

completed during the course of the intervention, and (3) postsecondary enrollment data that will come from the National Student Clearinghouse (NSC). The exit survey instrument included students' postsecondary plans, summer plans, and social context questions. Additional data from school administrative records will also be used. In a second set of analyses, two years of longitudinal data from the CAP study will be utilized.

To estimate the effects of the near-age mentors summer outreach on college enrollment, we plan to estimate a simple Intent-to-Treat (ITT) model, where the primary outcome is of interest is whether or not the student enrolled in college in the fall. Additional models that will be estimated include a binary outcome for whether or not the student fulfilled their original plans based on their exit survey and also a categorical outcome for the type of postsecondary institution in which they enrolled. Each of these models will include student-level covariates, a school-level fixed effect, and the primary explanatory variable—assignment to treatment.

The secondary analyses, conducted with longitudinal data from students in the four CAP treatment schools, estimates a single-equation probit model against the binary outcome variable of participating in the treatment (take-up):

$$y_i^* = \delta + z_i\gamma + (CAP_i)\mu + \varepsilon_i \qquad i = 1, \ldots, N$$

y_{ij}^* is the latent variable

$y_{ij} = \begin{cases} 1 \text{ if } y_{ij}^* > 0 \\ 0 \text{ if } y_{ij}^* \leq 0 \end{cases}$ is the binary student outcome (take-up) as related to the latent variable

z_i is a vector of student characteristics for student *i* – we include:

- ACT math, science, reading, and English scores
- Cumulative GPA at end of senior year and change in GPA from junior to senior year
- Free and reduced price lunch eligibility
- Demographic information (race/ethnicity, gender, parent's education
- Dummy for school

CAP_i is the treatment variable for student *i* – whether they visited the CAP center 5 times or more.

Preliminary Findings:

Findings from this study will be available by the time of the conference in March. As NSC is currently collecting postsecondary enrollment data, analysis of the effects of the summer outreach is forthcoming. We are also still waiting from administrative data from our district partners that include final transcript information, such as ACT scores and grades. This data will also be analyzed soon and will be ready to present at the conference this spring. Overall, preliminary analysis of the effects of participation in the CAP intervention show significant, positive results (Authors, 2012) and we expect to find similar results as the programmatic elements are extended during the summer months. With respect to participation in the summer intervention, mentors reached out via email and phone to all students in the treatment group. The response rate of actually reaching the students in the treatment group was, on average, just over 50 percent. Multiple responses were made by the mentors to reach these students and

documented. Of the students who were contacted successfully, about a third participated in some form of follow-up meeting or conference with a summer mentor. Those who did chose not to follow-up with a mentor most often cited "being on-track" and not needed additional help as the reason.

Conclusion:

As the demand for a college-educated population increases, so have the numbers of interventions, many of which include components such as training for counselors to improve their college counseling expertise; offering schools tutoring and mentoring staff; providing information and assisting students with filling out financial aid forms; and taking students on college visits. While helpful, these interventions typically focus on one aspect of the college-going process, and few deliver training for accessing and using the information that many parents and students need to understand the material they receive. In contrast to these one-dimensional reforms, CAP is specifically designed to be an intervention that comprehensively connects several important aspects of the college-going process. Extending support services to students over the summer through simple, cost-effective outreach might further increase the likelihood of students successfully fulfilling their postsecondary aspirations.

Appendices

Appendix A. References

McClafferty, K. A., McDonough, P. M., & Nunez, A. (2002, April). *What is a college culture? Facilitating college preparation through organizational change*. Paper presented at the annual conference of the American Educational Research Association, New Orleans, LA.

McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity*. Albany: State University of New York.

Rosenbaum, J. E. (2001). *Beyond college for all: Career paths for the forgotten half*. New York: Russell Sage Foundation.

Appendix B. Tables and Figures

Table 1. Response Rate for Exit Survey (12th grade students) and Treatment Sample

	CAP Treatment Schools				**CAP Control Schools**				**Total**
	Urban		**Rural**		**Urban**		**Rural**		
	School A	*School B*	*School C*	*School D*	*School E*	*School F*	*School G*	*School H*	
Number of 12th grade students	170	117	107	133	261	160	77	138	1163
Number of exit survey responses	130	90	94	133	198	104	70	110	929
Response rate	76%	80%	88%	100%	76%	65%	91%	80%	80%
Summer Treatment (40% of N)	52	36	38	53	79	42	28	44	372