

## TRANSFER PARTNERSHIPS SERIES

# Exploring Characteristics of Students who Demonstrate Multi-Institutional Attendance Patterns (MIAP) in Two States



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DATA NOTE 7 | DECEMBER 2018

This data note extends research reported in Data Note 3<sup>1</sup> (Soler, Meza & Bragg, 2018, March) on *Initial Research on Multi-Institutional Attendance Patterns (MIAP) and Racial Equity* from a series of briefs that draws on the High-Performing Transfer Partnerships (HPTP) study conducted by the CCRI research team at the University of Washington<sup>2</sup> and on research associated with the Credit When It's Due (CWID) initiative (Taylor, Kauppila, Cortez-Lopez, Soler, Bishop, Meza, McCambly & Bragg, 2017). In this data note, we use MIAP as a unifying descriptor to capture transfer patterns other than the traditional vertical transfer pattern from community college to university. In particular, this research allows us to study the transfer patterns of students earn credits at two or more community colleges before transferring to a receiving baccalaureate institution. Focusing on this student population is important because these students may represent a large share of the transfer population in some states and may systematically differ from students who follow traditional vertical transfer patterns and are most fully represented in the literature.

The purpose of this data note is threefold. First, we describe students who follow MIAP to determine whether these students systematically differ in terms of demographics, especially race, from students who follow one-to-one transfer pathways. This topic is particularly important since recent large quantitative studies of transfer have dropped MIAP students from their datasets (see, for example, Xu, Xiaotao, Fink, Jenkins, & Dundar, 2017), further limiting research on MIAP students. Second, we examine the prevalence of MIAP in Ohio and to compare these results to the prevalence in Minnesota, representing two different state transfer landscapes that are important to research on the overall HPTP study. These states participated in the CWID initiative that the HPTP study builds upon. Finally, we hypothesize about the role that state policy on transfer plays in facilitating MIAP.

To address those questions, we use data from a cohort of students who transferred to a university between spring 2013 and September 2014 in Ohio. Furthermore, we compare our findings on MIAP in Ohio with previous findings in Minnesota reported in the third data note in this series (Soler, Meza & Bragg, 2018, March).

## MULTI-INSTITUTIONAL ATTENDANCE PATTERNS

Researching the different pathways that community college students follow when transferring to a four-year institution and how such transfer patterns differ by race and ethnicity addresses a gap in the transfer literature that needs to be filled. Documenting transfer patterns for different student populations is particularly important to breaking from race-

<sup>1</sup> Review Data Note 3, the Transfer Partnership Data Note series and other CCRI publications at <https://www.uw.edu/ccri/publications/>.

<sup>2</sup> The High Performing Transfer Partnership Study relies on a mixed-methods research design that includes student-level data from 15 states affiliated with the national initiative on reverse credit transfer called Credit When It's Due (CWID). The study involves analyzing the CWID dataset to identify pairs of high-performing transfer partnerships, defined as two- and four-year institutional pairs that outperform others in their state at transferring, retaining and graduating students, based on aggregate and disaggregated data (Yeh, 2018). For more information see Data Note 1.

neutral explanations of attendance patterns while providing a fuller and more inclusive understanding of transfer, including identifying where inequities prevail for racial and ethnic student groups (Soler, Meza, & Bragg, 2018, March).

On the issue of transfer behaviors, Adelman's influential work on transfer helped us understand that attending multiple higher education institutions is not rare. Looking back two decades or more, Adelman's research using National Education Longitudinal Study (NELS:1999/2000) indicated that 60% of undergraduates attended more than one institution by using a variety of transfer pathways. For example, he found that while some students at four-year institutions took classes at a community college (12%), others swirled back and forth between the two types of institutions (8%).

Recognizing the prevalence of different transfer pathways, we use the term MIAP to describe patterns in which students earn credits at two or more community colleges before transferring to a receiving baccalaureate institution. Findings by McCormick (2003) as well as more recent research by Shapiro, Dundar, Wakhungu, Yuan, and Harrell (2015), also confirm a high incidence of MIAP among students. At the national level, of all first-time students who started at a two-year institution in 2008, 15% are MIAP who started at a two-year school, 19% are MIAP who started at a public four-year institution, 18% are MIAP who started at a private non-profit institution; and 7% are MIAP who started at a private-for-profit institution (Shapiro et al., 2015). In addition, researchers have come up with definitions and classifications of transfer patterns that include, but are not limited, to reverse transfer, swirling, concurrent enrollment, and dual credit (Townsend & Denver, 1999; de los Santos & Wright, 1990; Taylor & Jain, 2017) (see Data Note 3 for a more detailed review of this literature).

Whereas some recent research has documented MIAP (i.e. Wyner, Deane, Jenkins, & Fink, 2016), little has been done to describe students who follow MIAP patterns, especially patterns followed by different racial and ethnic groups. Part of the reason for this dearth of research has to do with the lack of racial and ethnic variables in the national datasets most frequently used to study transfer (Meza, Bragg, & Blume, 2018, February). To address this void, this data note seeks to examine the rate of MIAP and to determine whether MIAP students are systematically different than students who follow a traditional vertical transfer pathway. We leverage a dataset

that includes information on transfer students in Ohio on several sociodemographic variables, including race as well as findings on MIAP in Minnesota reported in Data Note 3.

## TRANSFER POLICY AND MIAP

Transfer and articulation policies and practices may facilitate particular transfer pathways and therefore influence MIAP. As indicated by Taylor and Jain (2017), issues associated with credit loss, inadequate articulation, and structural and institutional barriers represent problems for students who transfer between institutions. Although studying the association between MIAP and student success outcomes is out of the scope of this data note, we presume that transfer policies and programs that strengthen institutional partnerships, articulation agreements, and advising practices might also facilitate successful outcomes for students who follow MIAP. Documenting the prevalence of MIAP represents an initial step towards understanding how to tailor policies and programs to best serve these students.

In the two states in which we are documenting MIAP in this data note, Ohio and Minnesota, transfer policy varies. The state colleges in Minnesota are part of a coordinated system. The state's Office of Higher Education operates as a cabinet-level agency and with the exception of the University of Minnesota, all two-year and four-year institutions (seven universities and 24 community and technical colleges) are part of the Minnesota State Colleges and Universities system (MnSCU) (Taylor et. al, 2017). Since the 1990s, MnSCU has done significant work to create and implement a Minnesota Transfer Curriculum across all public higher education systems and has also tried to improve transfer by improving processes associated with course outlines, degree audit systems, and communication about transfer (Yeh, 2018, August). See Data Note 5 (Yeh, 2018, August), for a more detailed revision of state transfer policy in Minnesota.

Ohio is composed of 37 institutions that operate as a coordinated system of independently governed public colleges and universities. Regarding transfer, Ohio has a comprehensive articulation and transfer policy and has worked since 1990 to encourage procedures that ensure that students can begin higher education at any public institution of higher education and transfer coursework to

any other state institution without unnecessary duplication or institutional barriers (Taylor et al., 2017). In 2015, Ohio introduced legislation to develop a process to establish statewide guaranteed transfer pathways from 2-year to 4-year degree programs in an equivalent field, but this initiative took place after our dataset was compiled, so its impact is not assessed here.

In sum, both Ohio and Minnesota have implemented transfer-related reforms over the last two decades to improve transfer pathways. Understanding how states deal with transfer policy is relevant to identifying how transfer pathways work, including MIAP. Research also helps to lay the groundwork for whether states are creating transfer-receptive cultures that could be shaping transfer patterns and student outcomes.

## DATA

Similar to our previous Data Note 3 on MIAP in Minnesota, we analyzed the CWID dataset from Ohio that includes students who had enrolled in Fall 2012 and Spring 2013 at 13 public 4-year institutions and had transferred from one of the 22 public 2-year institutions that were part of the CWID pilot, providing data on students in 35 of Ohio's 37 higher education institutions. The 2-year institutions represent three types of sending institutions: a.) a public associate degree-granting institution within the state; b.) an in-state independent (private) institution; and c.) an out-of-state institution.<sup>3</sup>

We analyzed the student-level data by race as well as other demographics to understand if the students who follow MIAP in this state are significantly different from students who follow the one-to-one vertical transfer pattern. We examined these data on gender, race, Pell grant eligibility, and enrollment in remedial education. We combined MIAP students into one group that includes students who earn credits at two or more sending institutions (community and technical colleges) before transferring to a receiving baccalaureate institution. Then, we used various z-tests to test the null hypothesis of no differences in proportions of students who follow MIAP and students in the one-to-one transfer pathway.

Out of the Ohio sample of 37,815 students, 24,298 (64%) attended one institution before transferring. These students were counted as one-to-one vertical transfer students. We define the remaining 13,517 (36%) as MIAP since they earned credits from at least two or more institutions. We found that among the MIAP group, 24% attended two institutions, 8% attended three, and the remaining 12% attended four or more institutions before transferring the final time to a four-year university. Comparing these results from the Ohio CWID dataset to the Minnesota data reported in data note 3, we found considerable difference in the incidence of MIAP. Slightly over half (53%) of the students in Minnesota represent MIAP and among that group, 33% attended two institutions, 14% attended three, and the remaining 7% attended four or more institutions before transferring to a four-year university.

## RESULTS

The z-tests performed for the Ohio sample indicate significant differences between the MIAP and one-to-one vertical transfer groups on race, Pell grant eligibility status, and remedial course enrollment. Results show that African American students and students who are Pell grant recipients are significantly more likely to fall into the MIAP category ( $p < .01$ ). On the contrary, the proportion of White students is larger in the one-to-one vertical transfer pathway than in the MIAP category.

Though the MIAP group in Ohio is not as large as Minnesota, where we found that 53% of the students in the CWID sample followed MIAP, finding that 36% of students in Ohio also fit MIAP reinforces the need to document the large numbers of students who follow alternative patterns of attendance and who are often left out of the research on transfer, especially since these students seem to systematically differ by race, Pell grants, and enrollment in remedial education. The results on the differences between MIAP and the one-to-one transfer pattern in Ohio and Minnesota vary somewhat, but both studies show differences by demographics, with the differences between MIAP and one-to-one transfer for Minnesota arising in terms of race, Pell recipients, and

<sup>3</sup>A limitation of this sampling design is that it was constructed to study students potentially involved in reverse credit transfer and may not represent all university students in the Ohio higher education system. However, given that the sample does include data from students in 95% of the Ohio's public community colleges and universities, we believe that it provides an adequate representation of transfer students to inform future research on transfer and MIAP.

remedial courses, the differences for Ohio are limited to race, specifically African American students versus White students, and Pell grants only.

## CONCLUSIONS

Our goal of this data note is to examine the prevalence of MIAP in Ohio and compare these results to previous analysis of Minnesota, ascertaining whether significant differences between MIAP and non-MIAP students on demographics prevail in large samples drawn initially to study reverse credit transfer in the two states. Our results for Ohio are similar to our results for Minnesota in that the demographic characteristics of the one-to-one transfer pattern do not represent the MIAP pattern, and in both states, the MIAP student group is not small or similarly demographically composed to the one-to-one transfer group. Significant differences are revealed by our analysis between MIAP students and one-to-one transfer students on race and Pell grants. This finding calls for researchers to clearly describe how they are defining transfer and how they are constructing data sets to study transfer, ensuring that they are using datasets that are as inclusive as possible to account for the varied and complex attendance patterns exhibited by today's college students. We also urge researchers to use datasets that provide as comprehensive a set of demographic variables as possible, especially including racial and ethnic variables, to avoid potentially misrepresenting minoritized students and perpetuating race-neutral framing of transfer. Given the growing diversity of higher education and the prevalence of MIAP in two states that are making concerted statewide efforts to improve transfer, researchers should pursue future studies being mindful of these findings and their implications for transfer research design.

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Review the Transfer Partnerships Data Note series [here](#) or: <http://www.uw.edu/ccri/research/transfer/>

**Acknowledgment:** We thank the state leadership of transfer in Minnesota and Ohio for their persistent and enthusiastic support for our research on reverse credit transfer and high-performing transfer partnerships. We have learned a great deal studying transfer in these two Midwestern states, and we are very appreciative of the many insights we have gained from professionals who are working to improve transfer for their students.

Credit When It's Due (CWID) research is funded by the Bill & Melinda Gates Foundation grant (OPP1136274) to the University of Washington Foundation and the Community College Research Initiatives at University of Washington. This work is licensed to the public under the Creative Commons Attribution 4.0 license (see [creativecommons.org](https://creativecommons.org/)), which governs the Terms of Use. You are free to copy, display, and distribute this work, or include the content in derivative works, under condition that the work is fully and properly attributed to the authors and to the Community College Research Initiatives, University of Washington.

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**Suggested citation:** Soler, M. C. & Meza, E. A. (2018, December). *Exploring characteristics of students who demonstrate multi-institutional attendance patterns (MIAP) in two states* (Transfer Partnerships Series, Data Note 7). Seattle, WA: Community College Research Initiatives, University of Washington.