

# Credential Completion and Transfer Outcomes at North Carolina's Community Colleges Using IPEDS Outcome Measures



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## About This Report

The purpose of this report is to use a relatively new federal data source, the Integrated Postsecondary Education Data System (IPEDS) Outcome Measures (OM) survey, to explore long-term credential and transfer outcomes at North Carolina's community colleges. We find that more than half of the 2009-10 entering cohort North Carolina community college students either completed a community college credential, transferred, or were still enrolled within eight years, but that variation in outcomes emerged by student demographic characteristics, including Pell status, full-/part-time enrollment status, and first-time-in-college status. This report concludes with recommendations for community college leaders and institutional research professionals.

## About the Belk Center

The Belk Center for Community College Leadership and Research, at North Carolina State University, develops and sustains exceptional community college leaders who are committed to advancing equitable college access and student success, the social and economic mobility of their colleges' students, and the economic competitiveness of their regions. The Center provides professional development and research related to current and emerging student success opportunities and challenges facing community college leaders and policymakers in North Carolina and the nation.

**Commitment to Equity.** To date, our work at the Belk Center has focused on economic mobility, community building, and improving success outcomes for historically underserved populations in higher education, in support of the mission of community colleges and their efforts to uplift their communities. We recognize there is room for continuous improvement in elevating an understanding of and explicitly integrating a focus on racial equity across our existing work. Moving forward, the Belk Center will prioritize the following commitments and work in tandem with communities of color and leaders from diverse backgrounds.

**We commit** to racial equity through dismantling the systemic barriers that impede historically underserved populations, especially Black, Latinx, and American Indian students, from achieving their academic, economic, and social success through our evaluation, research, and support for developing the next generation of community college leadership.

**We commit** to enabling executive leaders to utilize evidence-based tools and culturally relevant strategies to inform decisions that lead to equitable student success for historically underserved populations, especially for Black, Latinx, and American Indian students.

**We commit** to centering the experiences and outcomes of Black, Latinx, and American Indian students in our research and in the preparation of future community college leaders.

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### **About the John M. Belk Endowment**

Based in Charlotte, North Carolina, the John M. Belk Endowment is a private family foundation committed to transforming postsecondary educational opportunities to meet North Carolina's evolving workforce needs. Its mission is aligned with the vision of its founder, the late John M. Belk who served four terms as mayor of Charlotte and was CEO of the department store company Belk, Inc. He created the John M. Belk Endowment in 1995 to fund a national merit scholarship program for his beloved alma mater, Davidson College. Now led by Mr. Belk's daughter, MC Belk Pilon, the John M. Belk Endowment continues to partner with innovative, results-oriented programs in North Carolina to further Mr. Belk's values, legacy, and focus on the value of education as a means to personal fulfillment and community vitality.

For more information, please visit <http://jmbendowment.org>.

### **Acknowledgements**

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# EXECUTIVE SUMMARY

**Given the broad mission of community colleges**, accurate information about institutional outcomes, such as credential completion or transfer, is difficult to capture, even using many existing approaches to collecting student outcomes data in higher education. The purpose of this report is to use a relatively new federal data source to explore long-term credential and transfer outcomes at North Carolina's community colleges. This report lends important context, derived from national survey data, to conversations among community college leaders and institutional researchers, about how best to measure and evaluate student outcomes and success at community colleges in North Carolina.

Until recently, key measures of institutional performance at the federal level such as graduation rates were derived from the federal Integrated Postsecondary Education Data System (IPEDS) Graduation Rates survey. However, the IPEDS graduation rate is an incomplete measure of community college performance because it does not include part-time students, nor does it capture transfer-out as a successful student outcome. This report uses data from a relatively new IPEDS survey, the Outcome Measures (OM) survey, which better captures comprehensive student outcomes that reflect the multiple missions of community colleges. Most notably, the OM survey captures outcomes of both full- and part-time students, and it measures transfer-out to other institutions. In this report, we use data from the 2009-10 OM cohort and explore outcomes eight years after students' initial enrollment, including: (1) certificate completion; (2) associate degree completion; (3) still enrolled at the same community college; (4) transferred without a credential; and (5) no credential, transfer, or enrollment. In addition to summarizing statewide results by these five outcomes, we also disaggregated outcomes by three demographics that the OM survey requires institutions to report: Pell recipient status, full- or part-time enrollment status, and first-time-in-college (FTIC) attendance status.

Overall, more than half (55%) of entering North Carolina community college students either completed a community college credential (30%), transferred (24%), or were still enrolled (1%) within eight years. Conversely, almost half (45%) of North Carolina community college students did not complete a community college credential or transfer, and they were also not enrolled at their original institution. Regarding Pell status, a larger percentage of non-Pell recipients transferred, completed a credential, or remained enrolled at the same institution (58%) compared to Pell recipients (53%). Approximately 60% of full-time students at North Carolina community colleges transferred, completed a credential, or remained enrolled compared to only 50% of part-time students. A larger percentage of students who were not FTIC (61%) transferred, completed a credential, or remained enrolled compared to FTIC students (52%).

Existing state and federal efforts to measure student outcomes, including transfer and credential completion, are advancing our understanding of how community colleges serve students and communities, but additional improvements are needed to measure outcomes with more precision and more comprehensively. Measuring transfer is especially complex and the IPEDS OM survey explored in this report captures a portion of, but not all, transfer students. Although existing state and federal measures of transfer and completion are useful to policy-makers and community college leaders, they provide an incomplete summary of transfer and completion in North Carolina.

Recommendations for community college leaders that derive from this report include:

1. **Institutions were provided** a data summary for their institution along with this report, and we recommend leaders share this summary with their leadership teams and use these resources to understand how individual performance is measured and shared at the federal level.
2. **We recommend** that leaders use data to assess the extent to which they are serving specific student groups, identify goals and targets to reduce equity gaps by sub-groups, and assess the extent to which policies and practices are equitable.
3. **A final recommendation** is to conduct a critical examination of existing state and institutional performance metrics, particularly related to transfer, and identify more precise and comprehensive ways to measure institutional performance that reflect the ways that students engage with the community college.

Recommendations for community college institutional research (IR) staff that derive from this report include:

1. **Further improvement** is needed for existing outcome measures at the institutional and state levels based on how federal data are collected and reported. The full report provides specific recommendations surrounding measurement issues.
2. **We recommend** that IR staff collaborate across colleges to share best practices for measuring student outcomes. We also recommend that IR create a plan, in collaboration with leadership, to develop and distribute key metrics for their individual institution.
3. **A final recommendation** is to underscore the need for community colleges to continue to measure, track, and report bachelor's degree attainment among transfer students, a measure not reported in IPEDS.





## INTRODUCTION

**Given the broad mission of community colleges**, accurate information about institutional outcomes, such as credential completion or transfer, is difficult to capture even using many existing approaches to collecting student outcomes data in higher education. The purpose of this report is to use a relatively new federal data source to explore long-term credential and transfer outcomes at North Carolina's community colleges. This report lends important context, derived from national survey data, to conversations among community college leaders and institutional researchers, about how best to measure and evaluate student outcomes and success at community colleges in North Carolina. Overall, the results show that over half of students who enroll at North Carolina community colleges either complete a credential, transfer to another institution, or remain enrolled at the same institution eight years after their initial enrollment. These results also point to discrepancies in students' outcomes based on student characteristics, such as full- or part-time enrollment or Pell recipient status, and large variation in outcomes among North Carolina community colleges. Existing federal and state data collection and reporting systems measure community college outcomes in several ways, and the results suggest the need to develop more precise and comprehensive community college outcome measures.

Until recently, key measures of institutional performance at the federal level such as graduation rates were derived from the federal Integrated Postsecondary Education Data System (IPEDS) Graduation Rates survey. However, the IPEDS graduation rate is an incomplete measure of community college performance because it does not include part-time students, nor does it capture transfer-out as a successful student outcome. As a result, after considerable

advocacy efforts from community colleges and various national organizations that represent them, IPEDS developed a new survey, the Outcome Measures (OM) survey, to better capture student outcomes (Lederman, 2017). These changes improved the measurement of institutional outcomes in ways that better reflect the multiple missions of community colleges. Most notably, the OM survey captures outcomes of both full- and part-time students, and it measures transfer-out to other institutions. This report is the first to examine North Carolina OM data. While the North Carolina Community College System (NCCCS) tracks student enrollment in subsequent institutions (transfer out), a frequently reported measure only tracks transfer for first-time fall credential-seeking student cohorts. Additionally, NCCCS only calculates transfer to 4-year institutions<sup>1</sup> (North Carolina Community Colleges, 2020). The OM survey data used in this report adopt a broader definition of transfer and student success, which includes credential completion and transfer to other 2-year institutions.

## MEASURING TRANSFER

It is relevant to situate the analysis in this report in a broader context of the measurement of transfer. Beyond the limitations of existing federal and state measures for transfer, measuring transfer has long been a challenging issue for multiple reasons. First is the issue of students' transfer intent, which is both hard to measure and is a construct that changes over time. For example, survey research shows that the percentage of beginning community college students who aspire to transfer varies based on how the question is asked (Cohen, Brawer, & Kisker, 2014). Moreover, longitudinal data on community college students' aspirations show that their aspirations for a transfer degree change over time (Deil-Amen, 2006). Lack of data on transfer student intent and/or changing intent has implications for the inferences we make about the success (or lack thereof) of community college students. Many transfer rates are calculated without information about students' intent to transfer, a significant issue when determining which students to include/exclude from the denominator in a transfer rate, what Spicer and Armstrong (1996) referred to as *the elusive denominator*. That is, one can generate higher or lower transfer rates by changing which students are and are not in the denominator.

A second and important issue in the measurement of transfer is that there are multiple types of transfer that are often not measured or accounted for in many institutional performance metrics. For example, many existing transfer measures and systems focus almost exclusively on vertical transfer - or 2-year to 4-year transfer.

“The OM survey data used in this report adopt a broader definition of transfer and student success, which includes credential completion and transfer to other 2-year institutions.”

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<sup>1</sup> NCCCS also tracks transfer student success after enrollment at a subsequent institution on their College Transfer Performance dashboard (see <https://www.ncccommunitycolleges.edu/analytics/dashboards/college-transfer-performance-pm7-institutional-outcomes>).

However, students engage in many more types of transfer including, lateral transfer, reverse transfer, reverse credit transfer, swirling, coenrollment/concurrent enrollment, and dual enrollment (Taylor & Jain, 2017). As Hossler et al. (2012) found in their analysis of the mobility of first-time college students, only 29% of students' first transfer was from a 2-year to 4-year institution (vertical transfer); 19% transferred from 2-year to 2-year, 26% from 4-year to 4-year, and 26% from 4-year to 2-year. Community colleges' role in the transfer ecosystem is much broader than 2-year to 4-year transfer, and states and institutions would benefit from more nuanced transfer indicators and performance metrics that reflect the reality of existing student mobility patterns.

Finally, a major issue in transfer measurement is data availability and precision. Because many higher education institutions and systems do not share data, it is often difficult to secure the data needed to assess transfer. Many institutions track transfer outcomes using National Student Clearinghouse's (NSC) Student Tracker, an important development for institutions that do not or cannot share data. Still, NSC data cannot provide precise information on transfer credits or the transferability of courses that might be needed to determine the success of transfer policies or the relative contribution of a community college education to bachelor's degree completion, for example.

Challenges with measuring transfer are relevant to researchers and policymakers because the way we measure and track transfer has implications for the conclusions we draw about student success and institutional performance. Although this report uses the OM survey, which is a new and more precise measure for assessing transfer outcomes at the federal level that improves existing measurement of transfer, the OM survey is still not the perfect measurement tool, as we describe below.

## THE OUTCOME MEASURES SURVEY

The OM survey used in this report followed the cohort of students who entered a North Carolina community college during the 2009-10 academic year. Students' outcomes were measured in 2017, eight years after initial enrollment. These outcomes included five primary categories, summarized and defined in Table 1: (1) certificate completion; (2) associate degree completion; (3) still enrolled at the same community college; (4) transferred without a credential; and (5) no credential, transfer, or enrollment. These outcomes are mutually exclusive, and credential completion measured the highest credential earned from the original community college. IPEDS only measures the transfer outcome for students who did not receive a credential. The OM data does not include a cumulative measure of transfer for all students. It is possible and likely that many students who completed a certificate or associate degree went on to transfer, but IPEDS does not measure transfer among credential completers. For example, a recent report indicates that in 2016, 31% of community college to public 4-year institution transfer students in North Carolina completed an Associate in Arts or Associate in Science degree (degrees designed specifically for transfer), while an additional 18% completed another kind of associate degree, prior to transfer (D'Amico & Chapman, 2018).

The lack of data on transfer among community college students who earned a credential is a major limitation of IPEDS OM survey and provides a strong rationale for institutional data collection on transfer.



## Table 1. OM Outcomes and Definitions

Outcome	Definition
<b>Certificate Completion</b>	Highest credential completed at the original community college was a certificate
<b>Associate Degree Completion</b>	Highest credential completed at the original community college was an associate degree
<b>Transferred without a Credential</b>	Did not complete a credential at original community college but transferred to another institution by the end of 8 years
<b>Still Enrolled at Same Community College</b>	Did not complete a credential at the original community college but was still enrolled at that same community college at the end of 8 years
<b>No Credential, Transfer, or Enrollment</b>	Did not complete a credential at the original community college, did not transfer, and was not enrolled at original community college at the end of 8 years

For the purposes of reporting these data, we first summarize statewide results by each of the five outcomes defined in Table 1. We also disaggregated outcomes by three demographics that the OM survey requires institutions to report: Pell recipient status, full- or part-time enrollment status, and first-time-in-college (FTIC) attendance status. Notably, a limitation of the OM survey is that it does not include information that would be necessary to disaggregate data by other student characteristics, such as race/ethnicity or sex. Table 2 provides specific definitions used by IPEDS for these terms. We conclude the report by describing the limitations of existing measurements of transfer at the federal and state levels and provide suggestions to improve transfer measurement.

**Table 2. Demographic Characteristics and Definitions**

<b>Demographic Characteristic</b>	<b>Definition</b>
<b>Pell Recipient Status</b>	<p><i>Pell Recipient:</i> Student received a Pell Grant from the community college any time during the 8-year observation period</p> <p><i>Non-Pell Recipient:</i> Student did not receive a Pell Grant from the community college any time during the 8-year observation period</p>
<b>Enrollment Status</b>	<p><i>Full-Time Enrollment:</i> Student enrolled full-time during their first semester at the community college (any time between July 1, 2009 and June 30, 2010)</p> <p><i>Part-Time Enrollment:</i> Student enrolled part-time during their first semester at the community college (any time between July 1, 2009 and June 30, 2010)</p>
<b>First-Time-In-College (FTIC) Attendance Status<sup>2</sup></b>	<p><i>First-Time Attendance:</i> Student was a first-time student at the undergraduate level in 2009-10</p> <p><i>Not First-Time Attendance:</i> Student had prior postsecondary enrollment at the undergraduate level after high school and before the 2009-10 academic year</p>

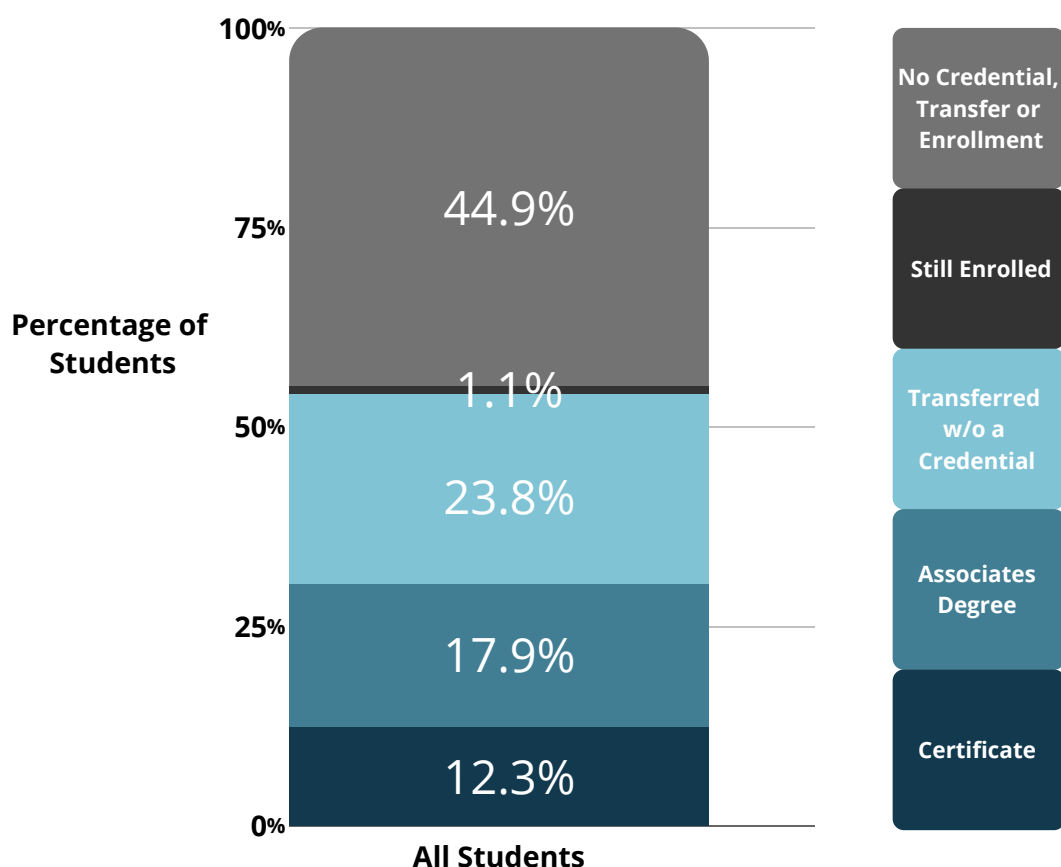
**“Overall, more than half (55%) of entering community college students either completed a community college credential, transferred, or were still enrolled within eight years.”**

<sup>2</sup>Note that the OM survey does not include dual enrollment students (Taylor & An, 2017).

## OVERALL LONG-TERM OUTCOMES

Figure 1 summarizes outcomes for the entire North Carolina Community College System. Overall, more than half (55%) of entering community college students either completed a community college credential, transferred, or were still enrolled within eight years. This figure shows that 24% of the 2009-10 entering cohort transferred to another institution without completing a community college credential, 12% completed a certificate, 18% completed an associate degree, and 1% remained enrolled at the same institution within eight years. Because students who completed credentials and transferred are counted as credential completers rather than transfer students in the IPEDS dataset, the percentage of students who transferred from North Carolina community colleges to other institutions is likely higher than 24%. Figure 1 also shows that almost half, 45%, of North Carolina community college students in this cohort did not complete a community college credential or transfer, and they were also not enrolled at their original institution. This percentage is slightly higher than the comparable national percentage of students who did not complete a credential, transfer, or remain enrolled, 43% (U.S. Department of Education, 2017-18).

**Figure 1. Eight-Year Student Outcomes for North Carolina Community Colleges**



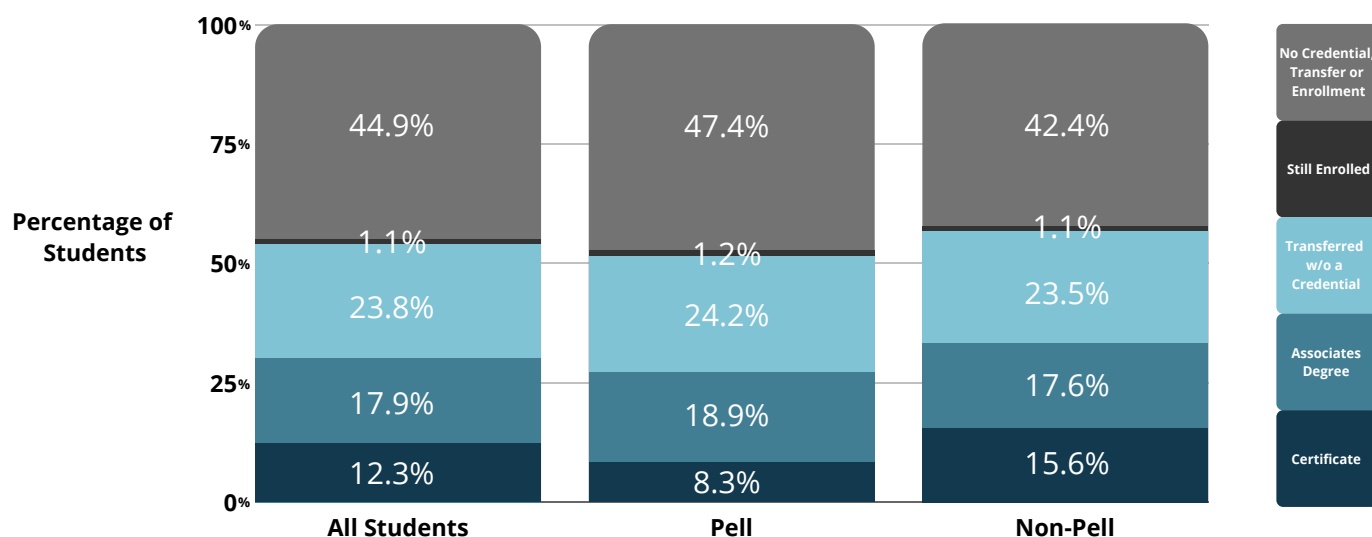
For the purposes of this report, we only share statewide averages and ranges for these outcomes rather than focusing on the outcomes of particular community colleges. However, institutional outcomes have been shared with each community college and are available to interested readers directly through IPEDS (<https://nces.ed.gov/ipeds/>). The percentage of students who transferred, completed a credential, or remained enrolled varied considerably by community college. Although the statewide average percentage of students with one of these three outcomes is 55%, these data show that this percentage varied from a low of 22% at to a high of 90%. Thirty-two of North Carolina's 58 community colleges reported above average rates on this metric of student success.

## OUTCOMES BY DEMOGRAPHIC GROUPS

### Outcomes by Pell Recipient Status

Overall eight-year outcomes for North Carolina community colleges by Pell recipient status are displayed in Figure 2. Pell status is a useful disaggregation because students who receive Pell may come from lower-income backgrounds compared to those who do not (see Table 2 for a description of how IPEDS defines a Pell recipient for the purposes of the OM survey). Overall, a larger percentage of non-Pell recipients transferred, completed a credential, or remained enrolled at the same institution (58%) compared to Pell recipients (53%). There was no difference between the percentage of Pell students who transferred without a degree (24%) and non-Pell students who transferred without a degree (24%). However, non-Pell recipients completed a Certificate at a higher rate compared to Pell recipients (16% compared to 8%). The percentage of Pell recipients who transferred, completed a credential, or remained enrolled also varied considerably by community college, ranging from a low of 20% to a high of 94%. Success rates for non-Pell students ranged from a low of 17% to a high of 96%.

**Figure 2. Eight-Year Outcomes by Pell Recipient Status**

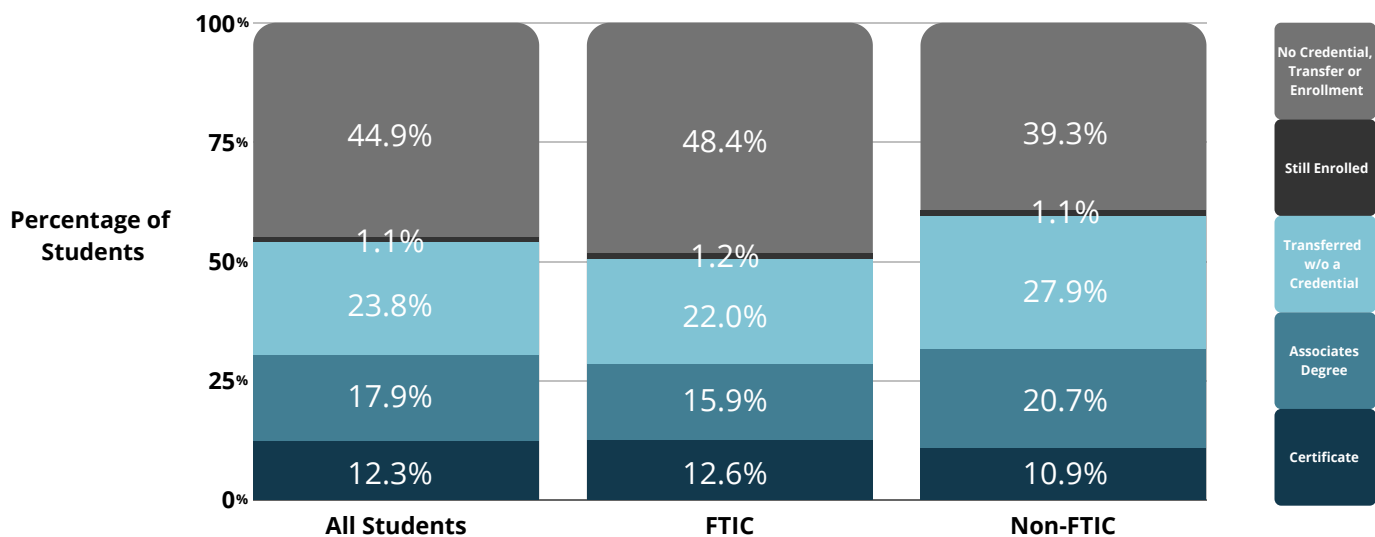




## Outcomes by Enrollment Status (Full-Time or Part-Time)

Regarding enrollment status, approximately 60% of full-time students at North Carolina community colleges transferred, completed a credential, or remained enrolled compared to only 50% of part-time students. The distribution between credential completers and transfers displayed in Figure 3 shows a pattern whereby a greater percentage of full-time students stayed at the community college to complete a credential, but a greater percentage of part-time students transferred without completing a credential. Although a smaller percentage of part-time students transferred or completed a credential, these results also varied considerably by community college. The percentage of part-time students who transferred, completed a credential, or remained enrolled ranged from a low of 18% to a high of 86%; whereas, the percentage of full-time students with one of these three outcomes ranged from a low of 23% to a high of 95%.

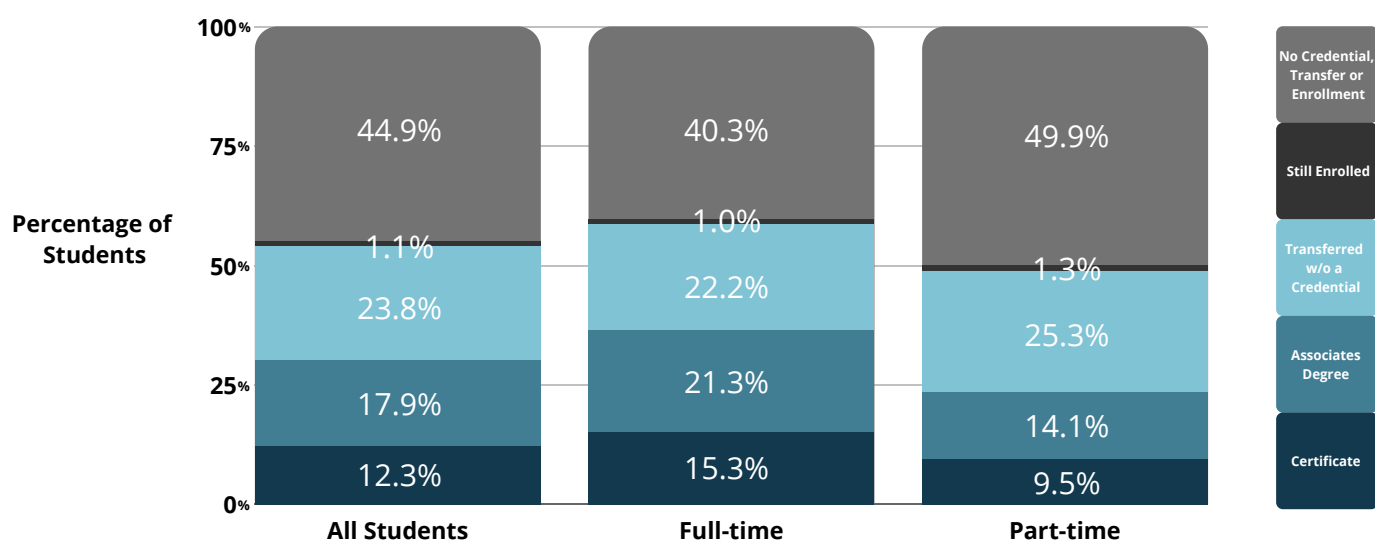
**Figure 3. Eight-Year Outcomes by Full- or Part-time Status**



## Outcomes by First-Time-In-College (FTIC) Attendance Status

The final demographic characteristic we examined was FTIC status. Figure 4 displays differences in outcomes for students who were and were not FTIC. A larger percentage of students who were not FTIC (61%) transferred, completed a credential, or remained enrolled within eight years compared to FTIC students (52%). This is intuitive because students who were not first-time had already attended college and likely accumulated some college credits. About 32% of non-FTIC students completed a community college credential, and a relatively high percentage of non-FTIC students also transferred (28%). The large proportion of non-FTIC students who transferred suggests that many North Carolina community college students are transferring multiple times. Similar to other demographics, the percentage of FTIC and non-FTIC students who transferred, completed, or remained enrolled varied by community college. Percentages for non-FTIC students ranged from 28% to 91%, while percentages for FTIC students ranged from 16% to 89%.

**Figure 4. Eight-Year Outcomes by FTIC Status**



## Improving Transfer Measures and Implications for Community College Leaders

The purpose of this report was to describe long-term student outcomes at North Carolina's community colleges, especially regarding credential completion and transfer. Overall, our findings suggest that within eight years of initial enrollment, a little more than half (55%) of students who entered North Carolina community colleges in 2009-10 transferred, completed a credential, or remained enrolled at the same community college, and slightly less than half earned no credential and did not transfer (45%). The data show that 24% of the cohort transferred without completing a credential and 30% completed a certificate or associate degree at the original community college. Although we do not know the percentage of students who completed a credential and transferred using this particular federal dataset, data from NCCCS show that about 9% of credential-seeking students in the fall 2015 cohort complete a community college credential and transfer to a 4-year institution within four years (North Carolina Community Colleges, 2020), so it is likely that some credential completers in the OM survey data also transferred at some point. However, around half of entering community college students do not achieve either of these outcomes. Although many students may not have transfer or credential aspirations, the majority of entering community college students do have these aspirations (Horn & Weko, 2009; Provasnik & Planty, 2008).

As a point of comparison to our results, the traditional completion metric available in IPEDS for this same cohort (the 2009-10 entering cohort) indicated an average 150% graduation rate of 22% for North Carolina community colleges. This metric is commonly reported in local, state, and federal documents and policy briefs and includes only credential completion. That is, it does not include other success metrics, such as transfer. Moreover, a 150% graduation rate (three years for an associate degree) is much shorter than the eight years included in the OM survey that we used. In contrast, NCCCS reports the percentage of first-time fall credential-seeking students with at least 42 non-developmental hours earned who graduated, transferred, or remained enrolled during their fourth academic year. For the fall 2012 cohort (the earliest cohort available from NCCCS), 43.1% had graduated, transferred, or remained enrolled in their fourth academic year. This success rate increased to 52.1% for the fall 2015 cohort. The contrast between our result and these success rates underscores the need for multiple outcomes of community college students to be measured and reported over longer observation periods and with the flexibility of using different denominators.

“Students who were Pell recipients were less likely to achieve a successful outcome compared to those who did not receive Pell funding. Moreover, these disparities varied considerably by community college.”

“...Transfer in the IPEDS dataset includes transfer to any institutional type, offering a more inclusive definition that captures many types of transfer, and provides information about student outcomes over an 8-year time-frame.”

This report also found important differences in the rates at which students transferred and completed credentials based on students' Pell status, full-/part-time enrollment status, and FTIC status. Pell recipients, part-time students, and FTIC students had lower overall rates of transfer or credential completion. These differences, especially regarding Pell recipient status, suggest equity gaps in the outcomes of North Carolina's community college students. Students who were Pell recipients were less likely to achieve a successful outcome compared to those who did not receive Pell funding. Moreover, these disparities varied considerably by community college. Our findings suggest the need for greater understanding of what explains these disparities and resulting institutional variation.

One important finding specific to transfer was that non-FTIC students (i.e., students who transferred into the community college) had higher transfer rates than completion rates, suggesting that community college students may transfer more than once as they pursue their postsecondary career. This aligns with existing research showing that community college students have complex enrollment and transfer patterns: they stop-in and stop-out of college, they swirl, they co-enroll in more than one institution, they transfer laterally, they dual enroll in high school, they reverse transfer, and they reverse credit transfer (Bahr, 2009; Crisp, 2013; Crosta, 2014; Taylor, 2016; Townsend, 2001). Future measurement of students' outcomes and institutional performance should account for the complexities of transfer and mobility patterns that extend beyond vertical transfer.

Existing state and federal efforts to measure student outcomes, including transfer and credential completion, are advancing our understanding of how community colleges serve students and communities, but additional improvements are needed to measure outcomes with more precision.<sup>3</sup> Measuring transfer is especially complex and the IPEDS OM survey only captures a portion of transfer students because it does not measure transfer for students who complete a credential. NCCCS produces an annual performance document (cited above) that reports credential completion, transfer, and transfer for students who complete community college credentials. However, the definition of transfer in that report is limited to university transfer and performance on these outcomes is only reported over a 4-year time-frame. In contrast, transfer in the IPEDS dataset includes transfer to any institutional type, offering a more inclusive definition that captures many types of transfer, and provides information about student outcomes over an 8-year time-frame. While the measures of transfer in both reports are useful, they each offer an incomplete summary of the state of transfer and student outcomes in North Carolina.

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<sup>3</sup>In the process of producing this report, we noted some errors in the data reported for North Carolina community colleges and worked with individual institutions to correct them in our dataset. As such, the numbers reflected in this report are somewhat different from those reported in IPEDS. These discrepancies point to a need for a stronger IPEDS data validation process.



## Recommendations for Community College Leaders:

1. With the publication of this report, each community college president was provided with a data summary specific to their college. We recommend that leaders share these reports with their leadership teams and use them to understand how their institutional performance is measured and shared at the federal level. As we highlight above, the federal outcome measures do not align precisely with state outcome measures, and institutional leadership should be aware of these differences.
2. This analysis identified wide variation in success outcomes for specific student groups (i.e., Pell vs. non-Pell recipients, full- vs. part-time students, and FTIC vs. non-FTIC students). We recommend institutional leaders use these data to assess the extent to which they are serving specific student groups, identify goals and targets to reduce equity gaps by sub-groups, and assess the extent to which their policies and practices are equitable for these student sub-groups.
3. This report has illustrated the complexities in the measurement of transfer and institutional success, and institutional leaders should critically examine existing state and federal institutional performance metrics, particularly related to transfer, and identify more precise and comprehensive ways to measure institutional performance that reflect the ways that students engage in the community college (see recommendations for institutional research [IR] below).

## Suggestions for Community College Institutional Research Staff:

1. This report highlights the need to further improve existing outcome measures at the institutional and state levels based on how federal data are collected and reported. Table 3 summarizes four specific measurement issues and recommendations. First, we recommend IR staff measure and report the outcomes of FTIC and non-FTIC students given that it is common for many community college students to transfer more than once. Second, transfer outcomes should include measures of student success other than traditional 4-year transfer (e.g., transfer to another community college). We recommend reporting and disaggregating by type of transfer, so colleges can understand which students transfer to 4-year institutions or to other community colleges. Third, IR should consider disaggregating and reporting outcomes by several student characteristics including, but not limited to, race/ethnicity, Pell Grant recipients, sex, and first-time/transfer. As noted above, these disaggregated outcomes can equip institutional leaders with the data needed to assess and address equity gaps in institutional outcomes. Finally, IR should measure student success over longer time spans to account for students who are successful but who take non-traditional pathways to this success.
2. It is likely that many IR staff have already addressed some of these measurement issues locally, and we recommend that IR staff collaborate across colleges to share these best practices. We also recommend that IR create a plan, in collaboration with leadership, to develop and distribute key metrics for their individual institution. This plan should include a consideration of the strategic allocation of funds for such an effort, so IR has adequate capacity to improve outcome measurement and share internally and externally.
3. A final recommendation is to underscore the need for community colleges to continue to measure, track, and report bachelor's degree attainment among transfer students, a measure that is not reported by IPEDS. As previously noted, NCCCS reports post-transfer outcomes, and we recommend that IR continue to track the success of transfer students over longer observation periods.

### Table 3. Measurement Issues and Recommendations

Measurement Issue	Recommendation for Improvement
<b>Different or Inconsistent Cohorts:</b> State and federal outcome measures use different cohorts for measuring outcomes.	Federal cohorts include FTIC and non-FTIC students (i.e., transfer students). IR should include FTIC and non-FTIC students and disaggregate outcomes by FTIC status.
<b>Incomplete Outcome Measures:</b> The state outcome measures capture both transfer and degree completion, but they only measure transfer to 4-year institutions.	IR should measure transfer to 2-year and 4-year institutions because many students follow those transfer pathways. IR dashboards and reports should display outcomes by type of transfer.
<b>Lack of Disaggregation by Student Characteristics:</b> Federal outcome measures are disaggregated and reported by several sub-populations, but some state and institutional measures are not.	IR should disaggregate and report outcomes by student characteristics, including race/ethnicity, Pell recipient status, sex, first-time/transfer status, and other historically marginalized student identities.
<b>Short Observation Period:</b> Federal outcomes are measured up to eight years after entry, but state measures are only measured for a four-year observation period.	IR should track students for at least six to eight years, allowing more time for community college student outcomes to be observed.

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