



ASSESSING THE CAPACITY OF IPEDS TO COLLECT TRANSFER STUDENT DATA

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Executive Summary

The National Postsecondary Education Cooperative (NPEC) commissioned this exploratory paper due to a growing interest in undergraduate transfer data and potential limitations of the Integrated Postsecondary Education Data System (IPEDS). This paper seeks to understand the current transfer student data landscape by documenting existing research and nomenclature and exploring the extent to which IPEDS supports research and analytical needs related to various topics surrounding transfer students. Through a scan of the relevant literature and datasets and semi-structured interviews with nine institutional and state stakeholders, this paper examines how transfer students are defined and reported to IPEDS and other sources, as well as how IPEDS could modify its current collection to learn more about transfer students.

A variety of data collection efforts currently exists related to transfer students in U.S. postsecondary institutions. Some of these collections reflect or approximate transfer activity among all U.S. undergraduates, while others are intended to reflect specific states, regions, or specific groups of institutions (e.g., community colleges). These data collections reflect both students transferring into and students transferring out of the respective institutions. The most significant efforts in terms of scope are the IPEDS Graduation Rates (GR), Outcome Measures (OM), and Fall Enrollment (EF) surveys and the National Student Clearinghouse (NSC) collection. In general, other collection efforts either depend on data from one, the other, or both of the IPEDS and NSC efforts, or they use cohort and related data definitions that are the same as those used by the Department of Education (ED).

The institutions and state agencies interviewed for this paper place a great deal of importance on transfer in their overall strategies and metrics and consider transfer to be an important part of their existing completion initiatives. Interviewees conduct a number of detailed internal analyses of transfer student data to support stakeholders' needs. Analyses are conducted on both transfer-in and transfer-out students, and the data are disaggregated on a number of factors. These analyses are meant to support evidence-based decision-making by policymakers, institutions, and other stakeholders.

Interviewees reported mixed levels of satisfaction with student transfer representation in IPEDS. The majority indicated that the OM survey is a good start to tracking the outcomes of transfer-in students; however, they rely on more detailed institutional or state-level transfer datasets as their primary data sources for transfer analyses. One interviewee noted that IPEDS has "historically not been seen as a value" to community colleges because of the past focus on first-time students, but the interviewee indicated this may change with the addition of the OM survey.

Some, but not all, interviewees provided suggestions for improving IPEDS transfer data. The suggested improvements were generally for minor changes to data dissemination or display on tools like College Navigator and the clarification of definitions and sources, rather than changes or additions to survey questions. Those who did provide recommendations expressed an interest in disaggregating non-first-time students further on OM by number of credits transferred or other indicators of progress. Some interviewees would like to see additional data

for transfer students, such as retention, financial aid, and admissions, recognizing the need to take reporting burden into account.

In addition to the recommendations from the interviewees, the authors recommend collecting transfer data by institution level, exploring the possibility of a transfer-specific survey, and weighing all recommendations against potential burden through a future technical review panel (TRP).

IPEDS currently has the capacity to answer fairly basic questions about transfer, particularly since the addition of OM. Given institutions' reported reliance on internal datasets, the current structure and limitations of IPEDS, the emergence of OM and non-federal student-level datasets, and the lack of recommendations by stakeholders for any major modifications or additions to the current collections, it may be that a few small changes to clarify the collection and reporting of current transfer data are sufficient. While minor, these changes would allow for improved reporting of data without increasing reporting burden for institutions.

Introduction

The National Postsecondary Education Cooperative (NPEC) commissioned this exploratory paper due to a growing interest in undergraduate transfer data and potential limitations of the Integrated Postsecondary Education Data System (IPEDS) data collection. This paper seeks to understand the current transfer student data landscape by documenting existing research and nomenclature and exploring the extent to which IPEDS supports research and analytical needs related to various topics surrounding transfer students. This paper also examines a variety of non-federal data collection efforts that identify and report transfer patterns, including any known limitations of these sources. Finally, through interviews with institutional and state stakeholders, this paper identifies potential areas for improving IPEDS transfer data focusing on the Admissions (ADM), Fall Enrollment (EF), Graduate Rates (GR), and Outcome Measures (OM) data collections.

In 2010, recognizing a need to better track the outcomes of community college students by moving beyond the traditional graduation rates of first-time, full-time students, then U.S. Secretary of Education Arne Duncan appointed the Committee on Measures of Student Success (CMSS), as authorized by the Higher Education Opportunity Act of 2008 (HEOA; U.S. Department of Education [ED], 2013). Recommendations from CMSS and subsequent technical review panels (TRPs) resulted in the introduction of the IPEDS OM survey to collect outcomes for non-first-time and non-full-time cohorts in addition to the traditional GR survey, which focuses on full-time, first-time students. While OM is a step in the right direction toward better representing community college students, questions remain as to how well IPEDS captures transfer patterns and experiences from the institutional perspective—and whether IPEDS is the right vehicle to represent the student experience, given the unit of analysis at the institutional level. The goal of this research is to improve the IPEDS transfer data collection so that it better reflects the current transfer landscape and to enrich the field of knowledge for consumers, policymakers, institutions, and IPEDS data users.

Research Questions

This paper addresses the following research questions:

- 1) What undergraduate transfer data are currently available through IPEDS?
- 2) How are undergraduate transfer students defined in IPEDS?
- 3) How do institutions define and report undergraduate transfer students for internal purposes?
- 4) What national data are needed to answer important questions about undergraduate student transfer (e.g., posed by policymakers, institutions, media, and consumers—students/parents)?
 - a. To what extent can IPEDS currently answer those questions?
 - b. What are the limitations with the current IPEDS data collection?
- 5) Are there other reliable sources of undergraduate transfer data?
 - a. If so, what data are they collecting and what are the limitations?

- b. How do these outside sources define transfer students?
- 6) After documenting the national need for undergraduate transfer data and limitations of IPEDS, how can the current IPEDS data collection be improved (i.e., definitions, instructions, or modifying/deleting/adding data) to better answer research and policy questions and reflect the trends occurring in the postsecondary landscape?

Methodology

The objective of this paper is to examine how transfer students are defined and reported, both to IPEDS and other sources, and how IPEDS could modify its current collection to learn more about transfer students. We sought to answer the research questions above using: 1) a scan of the relevant literature and datasets, and 2) semi-structured interviews with nine institutional and state stakeholders.¹

REVIEW OF THE LITERATURE AND DATASETS

We conducted a scan of the transfer literature and examined current IPEDS survey collections (EF, GR, OM) for areas of potential improvement or clarification, as well as any data collection efforts by the following potential non-federal sources:

- National Student Clearinghouse (NSC)
- American Association of Community Colleges (AACC) Voluntary Framework of Accountability (VFA)
- Student Achievement Measure (SAM)
- Complete College America (CCA)
- Western Interstate Commission for Higher Education (WICHE)
- Southern Region Educational Board (SREB)
- Midwestern Higher Education Compact (MHEC)
- New England Board of Higher Education (NEBHE)

SEMI-STRUCTURED INTERVIEWS

The purpose of the interviews was to understand how different types of institutions and higher education stakeholders define transfer and collect, analyze, use, and report transfer data, as well as to obtain feedback on how IPEDS could be improved to better reflect the transfer student landscape. We developed the interview protocol (Appendix A), which consisted of ten open-ended questions, in consultation with the National Center for Education Statistics (NCES) and our external advisor.

¹ Note: John Fink of the Community College Research Center, Teachers College, Columbia University, served as an external advisor for the project, providing guidance on literature to include and on institutions and states with high levels of transfer activity as potential interview subjects.

Seeking federal clearance from the Office of Management and Budget (OMB) to interview more than nine participants was beyond the scope of our study, so in consultation with NCES and our external advisor, we identified a heterogeneous sample of nine stakeholders (Table 1) representing a wide range of institution types and organizations with high levels of transfer activity.

Table 1. Interviewee characteristics

Interviewee	Category/description
1	State coordinating board
2	State board of education college office (public 2- and 4-year colleges)
3	State board of regents (public universities)
4	Community college system
5	4-year public institution (comprehensive public research university with large online presence)
6	4-year public institution (master's level with large adult and transfer population)
7	Community college
8	Community college offering bachelor's degrees
9	4-year private for-profit (bachelor's level with online and in-person programs)

Interview participants were recommended by our external advisor based on their prior involvement in transfer studies or initiatives. Participants, therefore, are knowledgeable about transfer data and issues and may be more likely than other institutions or organizations to have developed their own transfer data and analyses.

Review of the Transfer Literature

In 2016, nearly 2 million (37 percent) entering undergraduates began their postsecondary educations at community colleges, behind only public, 4-year institutions, which enrolled 43 percent of entering students (Snyder, de Brey, & Dillow, 2016). Community colleges are an important point of entry for their students, who view the sector as an affordable, accessible option (Ma & Baum, 2016; The Pell Institute, 2012). However, despite the fact that 65 percent of beginning community college students plan to transfer, only 24 percent do so within six years (Snyder et al., 2016). And, although 77 percent expect to eventually earn a bachelor's degree or higher, only 11 percent complete this goal within six years (The Pell Institute, 2011; Simone, 2014). Community college students often work while enrolled; attend part-time; require remedial coursework; and face a host of academic, financial, and personal challenges (The Pell Institute, 2011). Transfer is an essential step on the pathway to successful completion of a bachelor's degree for community college students and has become the focus of national success initiatives aimed at improving student supports and articulation agreements (Xu, Ran, Fink, Jenkins, & Dundar, 2018).

Transfer and student mobility in higher education is quite broad as students transfer within and across sectors. Moreover, transfer rates vary substantially across states (Jenkins & Fink, 2016;

Wyner, Deane, Jenkins, & Fink, 2016). Research and policy, however, has primarily focused on vertical transfer from community colleges to 4-year institutions given 1) its significance for workforce development and the need for skilled workers with bachelor's degrees, 2) its role in social mobility and the persistence of inequities in bachelor's degree attainment in the U.S. population, and 3) its importance in improving community college performance given the large proportion of students community colleges serve and their role as gateways to future bachelor's degree completion. For these reasons, transfer has become the focus of national success initiatives through improved student supports and articulation agreements (Xu, Ran, et al., 2018). Our review of the transfer literature explores the research on transfer students and the treatment of transfer in national, initiative, and state and regional data sets.

RESEARCH ON TRANSFER

The research on transfer students examines two general categories: 1) the transfer process and 2) the impact of various transfer policies on students' experiences and transfer student outcomes, including transfer credit efficiency. Bahr, Toth, Thirolf, and Masse's (2013) review of the transfer literature argues that the research on the transfer process and the transfer student experience is wide ranging (e.g., academic advising, institutional support, articulation agreements) but has a disproportionate focus on community college practices despite the important role 4-year institutions play in transfer students' ultimate postsecondary success. In contrast, there is a substantial body of peer-reviewed and non-peer-reviewed literature on transfer student outcomes, with an emphasis on the grades, persistence, and degree completion of students transferring vertically or transferring laterally, i.e., between two 4-year institutions. The transfer student outcomes literature is explored in more detail below.

The literature explores vertical transfer, or transfer between institution levels (e.g., from 2-year to 4-year institutions) using national surveys, federal and state datasets (Bustillos, 2017; Xu, Jaggars, Fletcher, & Fink, 2018), and institutional data (Aulk & Wes, 2017; Jenkins & Fink, 2016; Krieg, 2010; Laanan & Jain, 2016), with some studies using student-record data to also examine lateral transfer, or transfer between institutions of the same type (e.g., from one 2-year institution to another 2-year institution; Bahr, 2009, 2012). Vertical transfer studies most frequently compare the outcomes of students who transfer from community colleges to 4-year institutions with students "native" to 4-year institutions. For instance, Xu and Jaggars et al.'s (2018) recent peer-reviewed article used administrative data from the State Council of Higher Education for Virginia (SCHEV) and matched data from the NSC and Virginia's Unemployment Insurance records to examine the academic and employment outcomes of vertical transfer and native students who were first-time-in-college, credit-seeking students at any of the Virginia colleges beginning in fall 2004. Glass and Harrington (2002) also used statewide administrative data—collected from the North Carolina Community College System—to compare the persistence, average grade point averages, and completion rates of transfer and native students at one of North Carolina's large public research universities. Also, at the institution level, Aulk and West (2017) used administrative data from the University of Washington to compare persistence, average grade point averages, and attrition rates of degree-seeking undergraduate transfer and native students enrolled at the university between 1998 and 2006.

There are also a number of studies that use surveys to examine vertical transfer student adjustment (Laanan, 1998; Laanan, Starobin, & Eggleston, 2010; Young & Litzler, 2013), as well as surveys and student record data on vertical transfer among specific populations of transfer students, such as STEM majors (Gaalswyk, 2014; Jackson, 2013; Jackson & Laanan, 2014; Lopez & Jones, 2016; Packard & Jeffers, 2013), income groups (Jenkins & Fink, 2016), developmental education and student success course participants (Crisp & Delgado, 2014; Zeidenberg, Jenkins, & Calcagno, 2007), and international students (Zhang, 2016). Zeidenberg, Jenkins, and Calcagno (2007), for example, used student record data from the Florida community college system to compare the outcomes—including transfer into the Florida university system—of community college students who enrolled in a student success course with those of students who did not enroll in the course. Crisp and Delgado (2014), on the other hand, examined the impact of community college students' developmental education enrollment on subsequent vertical transfer using data from the Beginning Postsecondary Students Longitudinal Study (BPS: 04/09). And, using data from NSC, Jenkins and Fink's (2016) report on transfer metrics included an analysis of associate's degree/certificate completion, vertical transfer, and bachelor's degree completion by lower and higher income community college students.

In addition to the substantial amount of research on traditional vertical transfer pathways, there is also a body of research examining students' non-linear movement between institutions. Attendance patterns have become increasingly complex over the past three decades, with a substantial percentage of students attending multiple institutions before completing an award (Adelman, 1999, 2006; McCormick, 2003). For instance, Jenkins and Fink (2016) used NSC data to examine the national enrollment patterns of a cohort of community college entrants who completed a bachelor's degree in six years and found that only 8% followed the idealized "2+2" pattern of enrolling for two years at a community college and then transferring to and completing a bachelor's degree at a 4-year institution. The authors identified a myriad of other student enrollment patterns, such as students going back and forth between community colleges and 4-year institutions (see also: Fink, 2017). This type of multi-institutional attendance is often referred to in the literature as "swirling" and includes both students who are enrolled at more than one institution during the same term (concurrent enrollment or "double dipping") as well as students who transfer between institutions.

Adelman's (1999) seminal report was one of the first to document this trend using federal data sets, tracing the rise in multi-institution attendance over time across several longitudinal studies—the National Longitudinal Survey 1972 cohort (NLS-72), High School & Beyond/Sophomore 1982 cohort (HS&B/So), and 1990 Beginning Postsecondary Students longitudinal survey (BPS90). More recent studies, including Adelman's (2006) updated report, have continued to document the increasing percentage of students who swirl between institutions both within and across states (e.g., Borden, 2010; Curtin, 2017; Johnson & Muse, 2012; McCormick, 2003; Schulte, 2015; Wang, Wickersham, & Sun, 2016). The complexity of swirling transfer enrollment patterns is visible when looking at unique term-by-term enrollment sequences of transfer students. In a study using NSC data to examine community college students who transferred and earned bachelor's degrees in computer science (a subset of transfer students who might have had to follow a more structured transfer pathway), Jaggars,

Fink, Fletcher, and Dundar (2016) found that the 3,290 computer science graduates followed 1,213 unique term-by-term enrollment sequences over a seven-year period (in terms of whether they were enrolled at a 2- or 4-year institution each term). The most common pattern was spending one year at a community college and then four years at a 4-year institution, but this only accounted for 5% of graduates in the sample.

In terms of transfer efficiency and credit transfer loss, many researchers have expanded on Adelman's (2006) transcript analyses to better understand the academic pathways and institutional programs and policies that contribute to efficient degree completion (Bahr, 2013; Belfield, Crosta, & Jenkins, 2016; Bragg, 2012; Calcagno, Crosta, Bailey, & Jenkins, 2007; Hagedorn, 2005; Leinbach & Jenkins, 2008; Wang, 2016). Fink, Jenkins, Kopko, and Ran (2018) describe three different ways the transfer literature has measured credit transfer efficiency: credit transferability (the number of credits earned at an institution that may or may not be accepted upon transfer), applicability of transfer credit (the number of credits that are accepted upon transfer and applicable to students' programs of study), and excess credits among completers (the total number of credits earned or attempted beyond the required credits needed to graduate). Using data mining techniques, the authors' analysis of student transcripts from two states indicated that excess credit accumulation was associated with enrollment in more lower level courses rather than in upper level courses specific to the students' majors.

TRANSFER DATA SOURCES

A variety of data collection efforts currently exist surrounding transfer students in U.S. postsecondary institutions. Some of these collections reflect or approximate transfer activity among all U.S. undergraduates, while others are intended to reflect specific states, regions, or a specific group of institutions (e.g., community colleges). These data collections reflect both students transferring into and students transferring out of the respective institution. The most significant efforts in terms of scope are the IPEDS GR, OM, and EF surveys and the NSC collection effort (Table 2). Generally, other collection efforts either depend on data from one, the other, or both of the IPEDS and NSC efforts or they use cohort and related data definitions that are the same as those used by the Department of Education (ED).

IPEDS (GR, OM, and EF)

Since 1997, ED has collected completion and transfer data for first-time, full-time fall entry students via IPEDS GR survey. Critiques of this data collection focus on the fact that it does not provide a complete picture of a significant share of students, particularly in some sectors. With the inaugural OM survey in 2015, ED began collecting outcomes data reflecting additional part-time and transfer-in student cohorts in addition to the GR first-time, full-time cohorts. The GR data can be delineated by race/ethnicity and gender and, new in the 2016 year, by Pell Grant and Subsidized Stafford Loan receipt; the OM data can be delineated by Pell receipt. The EF

survey provides a headcount snapshot of students enrolling at institutions in the fall of the academic year and identifies students with and without prior postsecondary experience.²

The GR and OM survey data define a transfer-out student as one who has not completed a program or graduated from the reporting institution but has subsequently enrolled in any program of an eligible institution. Institutions that include the provision of substantial preparation for enrollment elsewhere in their missions are instructed to report transfer-out students on the GR; the OM survey includes transfer-out students regardless of whether the institution has transfer preparation as part of its mission. Dual enrollment high school students are not included in either the GR or OM cohorts. The EF survey defines transfer-in students as non-first-time credential-seeking undergraduates who are new to the institution but with prior postsecondary experience; students can enter with or without credit (NCES, n.d.).

² An additional federal effort, the Beginning Postsecondary Studies (BPS) sample survey, tracks transfer data, also for first-time students, and can be disaggregated by a number of student demographics and academic background characteristics. However, since this is a sample survey, data for individual institutions cannot be represented.

Table 2. National data collection efforts on transfer students

	Graduation Rate (GR)	Outcomes Measures (OM)	Fall Enrollment (EF)	National Student Clearinghouse (NSC)	Beginning Postsecondary Students (BPS)
Universe/Sample (institutions)	Universe: all Title IV institutions.	Universe: 2- and 4-year degree-granting Title IV institutions.	Universe: all Title IV institutions.	Sample.	Sample.
Participation/Coverage¹	49% of institutions reported transfer-out data for the 2008 cohort. ²	53% of institutions reported transfer-out data for any 2008 cohort, and 51% of institutions reported students in a 2008 non-first-time cohort. ²	63% of 2- and 4-year institutions reported transfer-in data for FT and/or PT undergraduate for fall 2008. ²	45% of Title IV participating institutions participate in NSC at the time of this study. ³	†
Students	<ul style="list-style-type: none"> •First-time, full-time, degree-seeking students. •A fall cohort is used by institutions with standard academic terms; a full-year cohort is used by institutions offering primarily occupational/vocational programs and operating on a continuous basis. •Dual enrollment students not included. 	<ul style="list-style-type: none"> •First-time, full-time degree/certificate-seeking entering students. •First-time, part-time entering. •Non-first-time, full-time entering. •Non-first-time, part-time entering. <p>Beginning with the 2017-18 collection, all institutions report on a full-year cohort.</p> <p>Dual enrollment students not included.</p>	<ul style="list-style-type: none"> •Undergraduate, degree/certificate-seeking, first-time. •Undergraduate, other degree/certificate-seeking, transfer-ins. <p>Credit (e.g., dual enrollment, Advanced Placement credit) or postsecondary award received before the student earned a high school is not considered prior postsecondary experience.</p>	<p>Include students who are or were enrolled in the current term:</p> <ul style="list-style-type: none"> •In continuing education. •Taking no classes but preparing a thesis or dissertation. •Studying at another school under a consortium arrangement but for whom you are the home school. •Studying abroad under a school-sponsored program. •Enrolled but not pursuing a degree or certificate. •Attending any other special program that qualifies as enrolled for purposes FFEL and Direct. •Students for whom you do not have a valid Social Security number on record. •Foreign students to whom you have assigned alternate numeric identifiers. •High school students who are receiving Title IV Aid. •Whether or not to report non-degree seeking students depends on school's policy. 	<p>Students enrolled in their first year of postsecondary education.</p>

Table 2. National data collection efforts on transfer students

	Graduation Rate (GR)	Outcomes Measures (OM)	Fall Enrollment (EF)	National Student Clearinghouse (NSC)	Beginning Postsecondary Students (BPS)
Transfer-out	Transfers-out who did not complete a program if the institutional mission includes providing substantial preparation for students to enroll in another eligible institution WITHOUT having completed a program. A school is required to report only on those students that the school knows have transferred to another eligible institution. If it is not part of your mission, you may report transfer-out data if you wish. A school must document that the student actually transferred.	Students who have not completed a program or graduated but have subsequently enrolled in any program of an eligible institution. Report transfer out regardless if the institution has transfer prep as part of mission.	†	Can be computed; no explicit definition.	Transfer status is checked at each follow-up; follow-ups depend on initial NPSAS year. Transfer defined as student leaves one institution (the origin) and enrolls at another institution (the destination) for four or more months consecutively without being concurrently enrolled at the origin institution.
Timing of transfer-out record	150% of normal time to completion (number of years depends on degree type sought) for students not first attaining a credential at the home institution.	8 years after initial enrollment at home institution for students not first attaining a credential at the home institution.	†	Fairly real-time transfer data could be computed. NSC states: Timing and frequency of enrollment reporting vary from school to school and depend on each school's calendar, clock methodology (clock hours, semester, trimester) and break periods. We recommend that semester schools generate a report four times during the term: Census date; every 30-45 days (subsequent-of-term); term end.	Transfer status is checked for year month/year for duration of follow-ups.

Table 2. National data collection efforts on transfer students

	Graduation Rate (GR)	Outcomes Measures (OM)	Fall Enrollment (EF)	National Student Clearinghouse (NSC)	Beginning Postsecondary Students (BPS)
Disaggregate	<ul style="list-style-type: none"> •Race/ethnicity. •Gender. •Gender and race/ethnicity. •New in 2016: Pell grant and Subsidized Stafford loan recipients. 	<ul style="list-style-type: none"> •Pell grant receipt (new in 2017-18). •Full- and part-time attendance (based on first term of attendance). •First-time versus non-first-time. •Data are collected for combinations of the disaggregations above, e.g., the number of first-time, full-time, Pell recipients can be analyzed. 	Full- and part-time students.	<p><u>Required:</u></p> <ul style="list-style-type: none"> •Enrollment Status (full-time; three-quarter-time; half-time; less-than-half-time; withdrawn; graduated; approved leave of absence; deceased). •Date of birth (can compute age). •Class or level (freshman, sophomore, junior, senior; certificate, associate’s, bachelor’s, unspecified, post-baccalaureate certificate, master’s, doctoral, postdoctorate, professional, unspecified). •First-time, full-time degree/certificate seeking undergraduate flag. •Degree-seeking. •Gender. •Race/ethnicity. <p><u>Added in October 2016:</u></p> <ul style="list-style-type: none"> •Program information (CIP Code, CIP Year, Program Credential Level, Program Length, Program Begin Date, Program Enrollment Status and Effective Date). <p><u>Currently Optional:</u></p> <ul style="list-style-type: none"> •Veteran’s status indicator •Pell Grant recipient flag •Remedial flag (i.e., is student in at least one remedial course?). •Citizenship flag. 	All NPSAS demographics and background data elements are available.

Table 2. National data collection efforts on transfer students

	Graduation Rate (GR)	Outcomes Measures (OM)	Fall Enrollment (EF)	National Student Clearinghouse (NSC)	Beginning Postsecondary Students (BPS)
Transfer-in	†	A degree/certificate undergraduate entering the institution for the first time but known to have previously attended a postsecondary institution. The student may transfer with or without credit.	A degree/certificate undergraduate entering the institution for the first time but known to have previously attended a postsecondary institution. The student may transfer with or without credit. (Snapshot data; Institutions with traditional academic year calendar systems report enrollment as of October 15 or the official fall reporting date of the institution. Institutions with calendar systems that differ by program or allow continuous enrollment report students who are enrolled at any time between August 1 and October 31.)	Can be computed; no explicit definition.	†

†Not applicable.

¹Institutional participation rates based on Coffey Consulting’s analysis of the 2008 IPEDS universe: Title IV primarily postsecondary institutions located in the United States and the other jurisdictions of the United States that are open to the public, as well as the U.S. service academies.

²Percentage of institutions from the 2008 IPEDS universe that reported transfer-in enrollment data in the Spring 2009 Enrollments Component; non-first-time cohort data and enrolled at another institution at 8 years data for the 2008 cohort in the Winter 2016-17, Outcome Measures component, and transfer-out completion data for the 2008 cohort in the Spring 2012 or Winter 2014-15 Graduation Rates components. See Tables 3 and 4 for additional details.

³Institutions participating in the data collection effort.

Table 3 provides detail of the transfer-in data reported on the EF and OM surveys among institutions in the 2008 IPEDS universe, by sector. The majority of 4-year and public 2-year institutions report transfer-in students on the EF survey. For-profit institutions reported transfer-in students at a slightly lower rate on the OM survey than the EF survey.

The differences in reporting rates among these sectors may reflect issues with reporting the data or a change in the reporting universe from 2008 to 2016 compared to the sectors with more similar report rates on the two surveys.³

Table 3. Institutions reporting transfer-in data on the IPEDS 2008 Fall Enrollment and Outcome Measures (2008 student cohort) surveys, by sector

Sector ¹	Total number of institutions	Fall Enrollment (EF) ²		Outcome Measures (OM) ³	
		Number	Percent	Number	Percent
Total	6,787	4,265	62.8	3,426	50.5
Public, 4-year or above	671	628	93.6	631	94.0
Private not-for-profit, 4-year or above	1,589	1,212	76.3	1,208	76.0
Private for-profit, 4-year or above	538	404	75.1	270	50.2
Public, 2-year	1,135	953	84.0	930	81.9
Private not-for-profit, 2-year	189	96	50.8	74	39.2
Private for-profit, 2-year	903	395	43.7	313	34.7
Public, less-than 2-year	217	62	28.6	—	—
Private not-for-profit, less-than 2-year	86	12	14.0	—	—
Private for-profit, less-than 2-year	1,459	503	34.5	—	—

—Not available.

¹Sector classification in the 2008 IPEDS universe.

²Institutions that reported enrollments (or implied zeros) for fall 2008 of full-time or part-time undergraduate, other degree/certificate-seeking, transfer-in students in the Spring 2009 Enrollment component.

³Institutions that reported data (or implied zeros) for full-time or part-time undergraduate degree/certificate-seeking non-first-time entering 2008 cohorts in the Winter 2016-17 Outcome Measures component.

NOTE: Includes degree granting and non-degree granting institutions that were (1) in the IPEDS universe in fall 2008, (2) open to the public, (3) participant in Title IV program, and (4) primarily postsecondary institutions in the U.S. States, District of Columbia, and other U.S. jurisdictions and territories, as well as U.S. Service Academies.

SOURCES: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS); Fall 2008, Institutional Characteristics; Spring 2009, Enrollment; and Winter 2016-17, Outcome Measures components.

³ Less-than-2-year institutions did not report OM data in 2016, although some institutions that were classified as less-than-2-year in 2008 had been reclassified by 2016 and did report OM data on the 2016 survey. The analysis did not attempt to account for institutions that reported data on the OM survey under different unique IPEDS identification numbers than the ones they used in 2008.

Table 4 provides detail of the transfer-out data reported by institutions for the 2008 cohort of students in the IPEDS GR and OM survey data, by sector. All sectors reported transfer-out data at higher rates on the OM survey than on the GR survey.

Table 4. Institutions reporting transfer-out data for the 2008 student cohort on the IPEDS Graduation Rate and Outcome Measures surveys, by sector

Sector ¹	Total number of institutions	Graduation Rate (GR) ²		Outcome Measures (OM) ³	
		Number	Percent	Number	Percent
Total	6,787	3,335	49.1	3,594	53.0
Public, 4-year or above	671	391	58.3	636	94.8
Private not-for-profit, 4-year or above	1,589	411	25.9	1,247	78.5
Private for-profit, 4-year or above	538	92	17.1	285	53.0
Public, 2-year	1,135	845	74.5	950	83.7
Private not-for-profit, 2-year	189	30	15.9	88	46.6
Private for-profit, 2-year	903	133	14.7	388	43.0
Public, less-than 2-year	217	183	84.3	—	—
Private not-for-profit, less-than 2-year	86	63	73.3	—	—
Private for-profit, less-than 2-year	1,459	1,187	81.4	—	—

—Not available.

¹Sector classification in the 2008 IPEDS universe.

²Institutions that reported transfer-out students (or implied zeros) in the 2008 bachelor's or equivalent degree-seeking or other degree/certificate-seeking subcohorts in the Winter 2014-15 Graduation Rates component for 4-year institutions or the 2008 degree/certificate-seeking subcohort for 2-year institutions or 2008 adjusted cohort for less-than-2-year institution in the Spring 2012 Graduation Rates component.

³Institutions that reported data (or implied zeros) for the number of students in the 2008 adjusted cohort who enrolled subsequently at another institution at 8 years in the 2016 Outcome Measures component.

NOTE: Includes degree granting and non-degree granting institutions that were (1) in the IPEDS universe in fall 2008, (2) open to the public, (3) participant in Title IV program, and (4) primarily postsecondary institutions in the U.S. States, District of Columbia, and other U.S. jurisdictions and territories, as well as U.S. Service Academies. SOURCES: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS); Fall 2008, Institutional Characteristics; Spring 2012, Graduation Rates; Winter 2014-15, Graduation Rates; and Winter 2016-17, Outcomes Measures components.

BPS

NCES also collects information about transfer-out students through its sample surveys, namely the Beginning Postsecondary Students Longitudinal Survey (BPS). The following information is available about transfer-out students through BPS: date of first transfer, transfer institution type, degree program at transfer institution, transfer after attainment, cumulative persistence and outcomes at transfer institution, transfer status at various points in time, transfer direction, and attempt to transfer credits. These data can be disaggregated by student and institutional characteristics, including financial aid receipt, attendance status, age, and income, among others.

NSC

Having begun operations in 1993 with a relatively small base of institutions, National Student Clearinghouse (NSC) collects enrollment activity and degree completion data from postsecondary institutions. NSC is largely a data collection center and clearinghouse where participating institutions' data are pooled and enrollment information is compiled and provided to requestor institutions.

NSC collects data on all students enrolled at an institution, regardless of enrollment status. Additionally, it collects a number of data elements reflecting student characteristics that can be used for analysis and disaggregation, including: enrollment status, age, gender, race and ethnicity, student level (freshman, sophomore, etc.), degree-seeking status, and first-time or not a first-time student status. The type and level of institution transferred from or to can also be derived from the data. NSC also collects a number of optional data elements including: veteran status, Pell grant receipt, and whether the student enrolled in remedial coursework.

In a recent study of institutional and state effectiveness in helping community college students earn bachelor's degrees, NSC calculated "transfer-in" bachelor's completion rates for 4-year institutions with a denominator that included students who started at any community college (retrospectively) and enrolled at a 4-year institution during the study's tracking period. This study similarly calculated a "transfer-out" bachelor's completion rate for community colleges, which described the percentage of a community college's first-time cohort of students who transferred to a 4-year institution and completed a bachelor's degree during the tracking period, regardless of credential attainment at the starting community college. Full- and part-time community college entrants were included in the cohorts in this study, but current and prior dual enrollment students were excluded (Shapiro et al., 2017). Results from this analysis of NSC data were used to create institutional transfer student outcomes reports, benchmarked to state and national averages, for the community colleges, private non-profit, and public 4-year institutions in three states to support statewide initiatives to improve transfer outcomes.

Additionally, other data collection efforts and initiatives use the NSC data to identify transfer-in and transfer-out students. For example, The Bill & Melinda Gates Foundation's Completion by Design (CBD) initiative, which included nine community colleges from Florida, North Carolina, and Ohio, collected data to support the tracking of students transferring out of an institution, both with and without earning a credential prior to transfer. The initiative also tracked whether the transferring institution was a 4- or 2-year institution. The initiative relied on institutional reporting and NSC data as data sources.

Although not a mandated data collection, over time NSC has expanded both the depth and breadth of its data collection efforts, and its coverage of some sectors is significant. Currently, it collects enrollment data—which allows for the identification and analysis of both transfer-in and transfer-out students—from 45 percent of institutions in the IPEDS Title IV universe. The public and private non-profit sectors have better response rates than the for-profit sector, e.g., 89 percent of public 4-year institutions participate compared to 29 percent of for-profit 4-year institutions (Table 5). Notably, these are institutional participation rates; 93 percent of students

in the IPEDS Title IV universe are potentially covered by NSC’s data collection. However, students can “opt-out” of data sharing, not allowing the sharing of their enrollment data, and NSC’s methodologies can also result in erroneous un-matches; the magnitude of these unmatched students is unknown (Goldrick-Rab & Harris, 2010).

Table 5. Number and percentage of institutions participating in the National Student Clearinghouse (NSC) data collection by sector: 2018

Sector	Number of institutions ¹	Participate in NSC data collection	
		Number	Percent
Total	6,760	3,042	45.0
Public, 4-year or above	755	669	88.6
Private not-for-profit, 4-year or above	1,634	1,173	71.8
Private for-profit, 4-year or above	529	153	28.9
Public, 2-year	990	850	85.9
Private not-for-profit, 2-year	163	44	27.0
Private for-profit, 2-year	842	94	11.2
Public, less-than 2-year	240	25	10.4
Private not-for-profit, less-than 2-year	79	13	16.5
Private for-profit, less-than 2-year	1,528	21	1.4

¹Includes degree granting and non-degree granting institutions that are (1) in the 2016 IPEDS universe, (2) open to the public, (3) participant in Title IV program, and (4) primarily postsecondary as well as not primarily postsecondary institutions in the U.S. States, District of Columbia, and other U.S. jurisdictions and territories. SOURCES: National Student Clearinghouse, May 2018, Enrollment Reporting program, DegreeVerify, and EnrollmentVerify Participation Lists; U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2016, Institutional Characteristics component.

National Data Initiatives

Other significant data collection efforts, largely undertaken by non-profit intermediaries and philanthropic-funded initiatives, collect a variety of data on student outcomes and transfers (Table 6). These efforts include, for example, Complete College American (CCA), the Student Achievement Measure (SAM), and the American Association of Community College’s (AACC) Voluntary Framework of Accountability (VFA). Operationally, these data collection efforts typically rely on, or ask institutions to provide, NSC data and use cohort definitions constructed similarly to those used for the NCES GR and OM survey cohorts. Conceived prior to the introduction of the IPEDS OM data collection, these efforts typically designed their data collection methodologies with the objective of encompassing a large set of institutions’ students, including not only first-time, full-time cohorts, but also first-time, part-time and not-first time, full- and part-time cohorts. Some of these collections support analyses similar to those supported by IPEDS data, e.g., race and ethnicity, gender, Pell receipt, and they provide the ability to perform additional disaggregation, such as by academic preparedness (VFA) or age and discipline (CCA). CCA’s collection also supports analyses based on the number of credits

transferred or any award made at the time of transfer. Notably, CCA is terminating its own data collection efforts and will rely on the NSC data collection in the future.

Regional Data

Regional, state-based-membership, non-profit organizations—WICHE, SREB, MHEC and NEBHE—with missions largely focused on facilitating student access and success and on improving outcomes for institutions in their respective regions are likely candidates to lead data collection efforts, including information surrounding transfer students. However, MHEC and NEBHE rely on GR and OM survey data, and neither collects related data independently. WICHE and SREB collect data from public institutions in their member states. Their transfer-in and transfer-out definitions are similar to those used by other organizations and described above, although their transfer-in definitions reflect the more expanded approach of including full- and part-time students and first-time and transfer students.

Transcript-level Data

Transcript-level data are required to examine topics such as credit transferability, applicability of transfer, and excess credits. However, institutional research and information technology departments' capacities; data sharing agreements; institutions' data warehouse structures; data definitions; and data transmission specifications, structures, and requirements can make the gathering of such data difficult. Seven NCES data collection efforts have included the collection of transcript-level data, most recently the 2002 Education Longitudinal Study (ELS:2002), Beginning Postsecondary Students Study of 2004/2009 (BPS:04/09), and Baccalaureate and Beyond Study of 2008 (B&B:08).⁴ Additionally, NSC recently launched the Postsecondary Data Partnership (PDP), funded by The Bill & Melinda Gates Foundation and the Lumina Foundation, which includes a transcript-level data collection. The goal of the PDP is to provide institutions with a "one-stop-shop" whereby institutions provide a singular detailed, student-level data submission to NSC, which, in turn, returns reports and data tools back to the institutions that will fulfill the institutions' data reporting needs, such as those mandated by a variety of initiatives, funders, etc. NSC kicked-off the PDP in 2018 with about 40 institutions, but its capacity and the timing of future expansions are unknown at this time.

⁴ NCES has collected transcript data via the following seven studies:

Year of transcript collection	Data source
1984	NLS:72
1993	HS&B:80
1994	B&B:93/03
2000	NELS:88
2010	BPS:04/09
2010	B&B:08
2014	ELS:2002

Other Transfer Datasets

In addition to collecting and reporting data about transfer students, some organizations have developed databases that track transfer policies such as articulation agreements. For example, the Education Commission of the States (ECS) tracks transfer and articulation policies across all 50 states. This resource tracks the following policies for each state: 1) Transferable core of lower-division courses; 2) Statewide common course numbering; 3) Statewide guaranteed transfer of associate degree; and 5) Reverse transfer.⁵

⁵ For more information, see <https://www.ecs.org/transfer-and-articulation-policies-db/>.

Table 6. Initiative data collection efforts

	American Association of Community Colleges (AACC) Voluntary Framework of Accountability (VFA)	Student Achievement Measure (SAM)	Complete College America (CCA)
Universe/Sample (institutions)	Sample: All community colleges that are AACC members are eligible to participate in the VFA.	Sample: Institutions that meet either of the following criteria: (1) an accredited, nonprofit university or college offering baccalaureate or associate degrees; (2) a member of one of the six partnership organizations (AACC, AASCU, AAU, ACE, APLU, NAICU). ¹	Sample: public institutions.
Participation/Coverage²	23% of public 2-year institutions. ³	18% of non-profit 2- and 4-year institutions. ³	All but 10 states participate at some level; the level in each state is unknown.
Students	<p>Students new to the reporting institution in the first, fall term of the tracking period, regardless of prior postsecondary education experiences.</p> <p><u>Include:</u></p> <ul style="list-style-type: none"> •Enrolled in the first fall term. •Full-time or part-time. •Do not need to be classified as degree- or credential-seeking. •Transferring-in, if enrolling for the first time at your institution. •Students who earned college credits during high school. •First enrolled in the summer preceding the fall term, such as summer bridge; must also have enrolled in the fall term. •Demonstrated ability to benefit. •Students exclusively enrolled in non-credit coursework in prior terms are eligible to be included in the Main Cohort if they begin taking credit or developmental education coursework in the first fall term. 	<p><u>Baccalaureate (BA) programs</u></p> <ul style="list-style-type: none"> •Full-time BA seeking students attending for the first time (GR definition; required). •Full-time BA seeking, transferred in (required). •Part-time BA seeking attending college for the first time (optional). •Part-time BA seeking, transferred in to the reporting institution (optional). <p><u>Associate Degree (AA)/Certificate programs:</u></p> <ul style="list-style-type: none"> •AA/certificate seeking (includes new and transfer in students) (required). •Full-time AA/certificate seeking (includes new and transfer in students) (required). •Part-time AA/certificate seeking (includes new and transfer in students) (required). 	First-time, full-time cohorts; first-time, part-time cohorts; and transfer at entry cohorts are identified in fall semester.

Table 6. Initiative data collection efforts

	American Association of Community Colleges (AACCC) Voluntary Framework of Accountability (VFA)	Student Achievement Measure (SAM)	Complete College America (CCA)
Transfer-out	<p>A transfer is defined as a student enrolling and taking courses at another postsecondary institution after their last enrollment at your institution. Note, the start date of the enrollment at the new postsecondary institution does not matter.</p> <p>What is reported:</p> <ul style="list-style-type: none"> •Two-year outcome: Number of students in the Two Year cohort who have not earned a formal award (e.g., AA or certificate) from your institution by the end of two academic years but have evidence of transferring to another postsecondary institution by the end of their second academic year. •Six-year outcome: Number of students in the Six Year cohort who have evidence of transferring to another postsecondary institution by the end of their sixth academic year. Both students who have not earned a formal award and those who earned a certificate or AA are considered to have transferred if there is a verified enrollment at another institution. 	<p>BA Seeking: Transferred/graduated from one or more subsequent institutions; transferred/are still enrolled at a subsequent institution.</p> <p>AA/Certificate Seeking: Transferred to one or more subsequent institutions (includes students who transferred and are still enrolled, students who transferred and have graduated, and students who transferred but whose enrollment or graduation status unknown).</p>	Transfer out, for 2-year colleges only.
Timing of transfer-out record	Two- and six-year outcomes.	<p>Outcomes available every year:</p> <ul style="list-style-type: none"> •Over six years for full-time BA seeking cohorts and AA/certificate seeking cohorts. •Over ten years for part-time BA seeking cohorts. 	4 academic years after initial enrollment.

Table 6. Initiative data collection efforts

	American Association of Community Colleges (AACC) Voluntary Framework of Accountability (VFA)	Student Achievement Measure (SAM)	Complete College America (CCA)
Disaggregate	<p><u>3 Cohorts:</u></p> <ul style="list-style-type: none"> •Main Cohort: All students who were enrolled in credit or developmental education classes in the fall term, had completed high school (or the equivalent), and were new to the institution regardless of prior postsecondary education experiences. •Credential Seeking Cohort: Students in the main cohort (defined above) who, based on their course-taking behavior, indicate that they are seeking a credential at the reporting college. •First-time Cohort: Degree- or certificate-seeking students [as defined for IPEDS] in the main cohort (defined above), who had no prior postsecondary experience, and attended your college for the first time. <p><u>Disaggregated by:</u> Race/ethnicity, gender, Pell Grant status, age, college-readiness, and full-time/part-time status.</p>	<p>No noted disaggregates other than those delineated above:</p> <ul style="list-style-type: none"> •Full-time/part-time. •First time/transfer. •BA v. AA/Certificate seeking. 	<ul style="list-style-type: none"> •Race/ethnicity. •Gender. •Income (Pell Grant recipients). •Age group. •Student attendance status. •Transfer versus native-to-the-institution students. •Degree type. •Discipline. <p>Students who transfer should be categorized by the number of credits they receive at the 2-year institution before they enroll in a 4-year institution. They should be reported in the following categories:</p> <ul style="list-style-type: none"> •Completed 12 or fewer credit hours. •Completed 13 to 30 credit hours. •Completed more than 30 credit hours but not an Associate’s degree. •Completed an Associate’s degree.
Transfer-in	Students who earned postsecondary credits after high school at another institution, if enrolling for the first time at the reporting institution, are included in the cohort.	Includes transfer-in students in reporting, but does not provide an explicit definition of transfer-in.	"Transfer at entry" is defined as a student who previously attended a postsecondary institution (with or without credit and who may or may not have a degree award). Undergraduate students entering the institution directly from high school who earned dual credit or advanced placement credit or any other type of college credit while enrolled in high school should not be considered transfer students at entry, but rather "first-time" students at entry.
Notes	Conducts its own annual data collection.	Largely depends on NSC data.	Typically supplied by systems or by the state for institutions using either a student-unit record system or NSC.

†Not applicable.

¹American Association of Community Colleges (AACC); American Association of State Colleges and Universities (AASCU); Association of American Universities (AAU); American Council on Education (ACE); Association of Public Land-Grant Universities (APLU); National Association of Independent Colleges and Universities (APLU).

²Based on Coffey Consulting’s analysis of the 2016 IPEDS universe: Title IV primarily postsecondary and Title IV not primarily postsecondary institutions located in the United States and the other jurisdictions of the United States that are open to the public, as well as the U.S. service academies.

³Institutions participating in the data collection effort.

Table 7. Regional data collection efforts

	Western Interstate Commission for Higher Education (WICHE)	Southern Region Educational Board (SREB)	Midwestern Higher Education Compact (MHEC)	New England Board of Higher Education (NEBHE)
Universe/Sample (institutions)	Universe: all public postsecondary institutions that participate in their respective states' SLDS.	Universe: public universities, 4-year and 2-year colleges, and technical institutes or colleges, SREB States.	No independent data collection.	No independent data collection.
Participation/Coverage¹	HI, ID, OR, and WA.	AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV.	†	†
Students	Students who graduated from public high school in a given academic year or entered a public postsecondary institution in the following academic year.	<ul style="list-style-type: none"> •Entering undergraduates for fall terms. Including full-time and part-time, first-time and transfer, degree/certificate- and non-degree-seeking; Include students who initially attended the prior summer term and returned again in the fall. •The full-time, first-time bachelor's or equivalent degree seeking undergraduates for fall terms is reported separately. 	†	†
Transfer-out	†	<u>Public 2- and 4-year institutions</u> <ul style="list-style-type: none"> •Documented transfer-out students by fall of year 2 from the cohorts. *Student who leaves the institution in which s/he is included in the cohort and enrolls at another institution. •For the fall cohorts listed, transfer-out students (non-completers) within 150 percent of normal time (equivalent to an IPEDS GR data element). 	†	†
Timing of transfer-out record	†	<ul style="list-style-type: none"> •Fall of year 2. •150% of time. 	†	†
Disaggregate	†	†	†	†
Transfer-in		Included in cohort, but not disaggregated in report.		
Notes	†	†	Uses IPEDS GR and OM data.	Uses IPEDS GR and OM data.

†Not applicable.

¹Based on Coffey Consulting's analysis of the 2016 IPEDS universe: Title IV primarily postsecondary and Title IV not primarily postsecondary institutions located in the United States and the other jurisdictions of the United States that are open to the public, as well as the U.S. service academies.

Interview Findings

Our semi-structured interview findings are organized as follows: the importance of transfer data, existing transfer initiatives, transfer reporting, transfer definitions, and IPEDS feedback and recommendations.

IMPORTANCE OF STUDENT TRANSFERS/DATA

The institutions and state agencies interviewed place a great deal of importance on transfer in their overall strategies and metrics and consider transfer to be an important part of their existing completion initiatives. Policymakers, institutions, and states are focused on tracking students' transfer activity and subsequent completion. Below are examples of responses that exemplify the emphasis on transfer in the institutions or states:

- Transfer students are a state “point of pride;” the number of students transferring did not decrease even with enrollment decreases after the Great Recession.
- Transfer is part of the state completion initiative.
- Transfer is a “huge piece.” Knowing where a student goes after earning his or her associate’s degree is valuable. A lot of transfer reporting is done at the state level.
- Transfer is still a “major part of the [2-year] institution ... even though it offers bachelor’s degrees.”
- Transfer “has been a priority at the institution for about 20 years.”
- A state is very focused on transfer; it is a “hot topic” in the legislature. Senators are “pushing the transfer agenda.”
- Transfer is part of the 4-year institution’s mission. It has more new transfer students each year than first-time freshman – transfers were nearly half of all new undergraduates in fall 2017.

TRANSFER INITIATIVES AND SERVICES

Some of the institutions and systems interviewed have implemented specialized transfer programs and policies to better serve their transfer students, including advising tools and guides and articulation agreements. Specific examples follow:

- One of the 4-year institutions has transfer admissions counselors and specialized transfer services.
- The community college system established a universal general education transfer equivalency with public and independent 4-year institutions that resulted in more successful bilateral transfer of associates of science degree students.
- The university has a growing transfer population in response to expanded online programs and community college partnerships with other states.
- A community college offers transfer advising guides.
- One state has had a legislatively-mandated transfer collaborative between community colleges and public universities for 20 years. The collaborative offers: tools to help

students navigate course transfer, degree pathways, an exam articulation, and a transfer data warehouse.

- One institution developed a “field of study” curricula, whereby lower division program requirements are guaranteed to transfer to the partnering institution.

TRANSFER REPORTING

Interviewees conduct a number of detailed internal analyses of transfer student data to support stakeholders’ needs. Analyses are conducted on both transfer-in and transfer-out students, and the data are disaggregated on a number of factors. These analyses are meant to support evidence-based decision-making by policymakers, institutions, and other stakeholders.

Examples of such analyses follow:

- One 4-year institution compiles a series of reports analyzing transfer-in students from each feeder community college, disaggregating the data on indicators such as: student level, enrollment status, number of credit hours transferred in, and associate degree completion, as well as on student characteristics such as race and ethnicity, international status, military status, first generation status, Pell grant receipt, and residence. These reports are shared with the community colleges. The institution also runs reports on transfer-out students using NSC data, focusing on first-time freshmen who do not persist. The institution tracks both enrollment and degree attainment using NSC data.
- A community college tracks transfer-out and stop-out students using NSC data. The college disaggregates transfer-outs by indicators including: major, GPA, dual credit, transfer-in status, number of credits transferred in, and receiving institution. Transfer is one of the institution’s key performance indicators, which they report annually to the board.
- The community college system and partner 4-year institutions in the state examine excess credits, credits accepted by the receiving institution, associate’s degrees awarded to transfer students, and course failure and success rates for transfer students.
- The transfer collaborative’s transfer data warehouse tracks course and degree completions from every public institution in the state and produces detailed reports around transfer student success.
- The state coordinating board looks “backward” at bachelor’s degree completers to examine how many credits they earned from each community college.
- 4-year institutions run comparison reports between “native” and junior- or sophomore-level transfer students on academic indicators such as GPA and outcomes such as persistence and completion rates.
- A state report shows transfer student sending and receiving institutions, using NSC data to report transfer-outs to private institutions.
- Institutions run reports on transfer intent and examine factors that might explain lower than expected transfer rates.
- One state produces a legislatively-mandated “formal transfer report” annually.

- Some transfer reports are used for formula funding, for example, tracking out-of-state awards for transfers through NSC data.
- The state college office “spends a lot of time looking at students who transfer to the university” both before and after earning an associate’s degree, including the students’ subsequent performance at the university, articulation, majors, and GPAs compared to native students. Transfer data are used for performance funding.

TRANSFER DEFINITIONS

Several interviewees reported that they do not have a single transfer definition but rather use different transfer definitions depending on the entity collecting the data. Interviewees reported that they adjust the data for state and federal reporting. For example, institutions that include dual enrollment students in their transfer cohort remove students who are flagged with the transfer-dual enrollment code when reporting to IPEDS. However, interviewees stated that they typically do not make any changes to their data for submissions to NSC since it acts primarily as a data collection center for the individual institution. Therefore, definitions can vary across institutions as the resulting data are intended for use by the individual institutions, not for comparison across institutions. For national completion initiatives such as CBD, institutions do not need to remove dual enrollment students but must flag them in a way that they can be removed for initiative-level cross-institution analyses.

We followed-up with interviewees to ask specific questions about their standard internal definitions to ensure comparable responses, summarized below.

State and institution definitions of **transfer-in** vary by:

- **Number of credits:** Two interviewees—one public 4-year institution and one state board of regents for public 4-year institutions—require that students accrue a minimum of 12 credits at their first institution to be counted as a transfer-in student. The other institutions and states interviewed do not include a minimum credit requirement as part of their transfer-in definition.
- **Dual enrollment:** Two interviewees—one a state board of education representing community colleges and public 4-year institutions, the other a community college system—include students with dual enrollment credit in their transfer definition if the student earned the credits at a different college than the one in which they are enrolled after high school graduation.

Typically, institutions and states do not have a **transfer-out** definition or they define it simply as enrolling in another postsecondary institution. Institutions and states typically track this information via NSC data, particularly for private or out-of-state institutions.

Institutions report two different **reverse transfer** definitions:

- Transferring from a 4-year to a 2-year institution, or
- Retroactive awarding of an associate’s degree.

Table 8, below, describes the **transfer** definition elements for each interviewee.

Table 8. Interviewee transfer definitions

Interviewee	Transfer definitions		
	Transfer-in	Transfer-out	Reverse transfer
State coordinating board	A student entering the reporting institution for the first time but who is known to have previously attended another postsecondary institution at the undergraduate level.	No definition.	No definition.
State board of education college office (public 2- and 4-year colleges)	A student who has previously enrolled in another postsecondary institution, with or without credit; includes students who were dual enrolled the last two years at a different college.	A student who leaves the reporting institution and enrolls at another institution.	No definition.
State board of regents (public universities)	Accrued at least 12 credits at the first institution; does not include dual enrollment.	No definition.	Students who transfer back to the community college from a 4-year institution.
Community college system	Any individual from another postsecondary institution, including dual enrollment from another college, and not limited to degree seeking students; including those who enrolled in the summer, with or without credit.	Enrollment in any other institution.	No definition.
4-year public 1 (comprehensive public research university with large online presence)	Degree-seeking students transferring in 12 or more credits who did not graduate from high school in the immediately prior year are included. If they graduated in the prior year, they are classified as first-time freshmen, regardless of hours transferred in. Dual enrollment credits do not count as transfer.	Identified through NSC data but “not technically counted ... for regular reporting purposes.”	No definition.
4-year public 2 (Master’s level, large adult and transfer population.)	Any previous postsecondary coursework completed post-high school/GED. Dual enrollment is coded separately. <i>Note:</i> <ul style="list-style-type: none"> • The student’s type is “Transfer” the first term, and then becomes “Continuing” after completing the first semester. If a student stops out, he/she comes back as a “Readmit.” (These are common state codes.) • The application asks about previous colleges/universities; transcripts are recorded to transfer in credits from up to 7 institutions. 	No definition.	No definition.

Table 8. Interviewee transfer definitions

Interviewee	Transfer definitions		
	Transfer-in	Transfer-out	Reverse transfer
Community college	<ul style="list-style-type: none"> • Students who come from any other institution. • No minimum number of credits. <p><i>Additional definition:</i></p> <ul style="list-style-type: none"> • First-Time Transfer (FTT): Students entering the reporting institution for the first time but are known to have previously attended another postsecondary institution at the undergraduate level. 	Students who transfer to any other institution.	The college attempts to reverse transfer credits of students who transferred to a 4-year without completing their associate’s degree by working closely with the 4-year institutions where most of its students transfer.
Community college offering bachelor’s degrees	<ul style="list-style-type: none"> • Students enrolling in an institution with any postsecondary experience. • Does not include dual enrollment. 	<p>Students enrolling in another institution without completing a degree at the sending institution.</p> <p><i>Additional definition:</i> Transfer with degree: Students enrolling in another institution after completing a degree at the sending institution.</p>	The college tracks students who did not graduate/complete an AA degree but are identified as enrolled at a 4-year through NSC data. Through an established partnership with the main receiving institution, it can tell students the classes they need to meet AA requirements.
4-year for-profit institution	Any prior postsecondary enrollment, including credits earned in high school.	Any enrollment in another institution.	No definition.

IPEDS FEEDBACK

Interviewees reported mixed levels of satisfaction with student transfer representation in IPEDS. The majority indicated that the OM survey is a good start to tracking outcomes of transfer-in students. One institution with a large transfer student population recognizes that it has useful peer comparison data from the OM survey, which it shares with stakeholders. However, most interviewees indicated they are waiting to use the OM survey until it is more established due to some recent changes to the survey.

The majority of interviewees rely on more detailed institutional or state-level transfer datasets as their primary data source for transfer analyses. One interviewee noted that IPEDS is a “huge reporting burden” for community colleges and suggested the data are not useful for community college consumers since their students are not typically “shopping around” for colleges. IPEDS has “historically not been seen as a value” to community colleges because of the past focus on

first-time students, but the interviewee indicated this may change with the addition of the OM survey.

In addition, while all institutions interviewed track transfer-out outcomes through NSC data, one noted that other colleges lack the resources or research capacity to do so, and therefore they are unable to report transfer-out to IPEDS. Also, some students block their records from NSC, and “there will always be people you will never be able to track.” Due to these factors, the IPEDS transfer-out data may be incomplete.

INTERVIEWEE RECOMMENDATIONS

Not all interviewees provided suggestions for improving IPEDS transfer data. The suggested improvements were generally for minor changes to data dissemination or display and the clarification of definitions and sources, rather than changes or additions to survey questions.

OM Changes: Interview participants made the following recommendations for improving the IPEDS OM survey:

- **Disaggregate non-first-time:** While interviewees generally find OM data useful, several suggested further disaggregating the “non-first-time” cohort by one of the following:
 - Number of credits, which can vary widely, and indicate progress towards a degree.
 - Upper/lower division.
 - Transfer vs. stop-out students.
 - One interviewee suggested examining how the coordinating boards are defining first time in college (FTIC) or non-FTIC and have IPEDS provide a crosswalk.
- **Clarify data display:** Interviewees made the following suggestions for improving the display of OM data:
 - Include information about the data source.
 - Clarify in College Navigator whether the award received is at the same or a different institution.

Additional Transfer Data: Interviewees identified the following transfer data points as “nice to have” or a “wish list,” recognizing burden should be considered (it may be that the sample surveys are more appropriate for some of these points):

- **Transfer retention rates:** Similar to those for first-time students.
- **Financial aid receipt:** Including native vs. transfer status and average loans and debt at graduation.
- **Transfer admissions data:** Similar in format to the Common Data Set.
- **12-month enrollment data:** Including enrollment status—first-time, continuing, and transfer students—similar to the EF survey (note: only one interviewee recommended this; others did not think the addition is worth the burden).

- **Transfers on the GR:** One institution with a higher graduation rate for transfers would like to report transfers on the GR, but it is aware this may not be beneficial or worth the burden to others.
- **Age and residence of transfer-in students:** Displaying transfer-in student characteristics from the EF survey in the College Navigator.

Participants also made the following recommendations for improving IPEDS collecting and reporting of transfer more generally:

- **Classifying transient students:** One community college representative noted a hesitancy among peers to use IPEDS because some definitions are unclear particularly within the transient context of community college students. For example, at what point is a student no longer part of a cohort and considered a stop-out – after a specific number of terms? And, as the interviewee noted, a common practice among students attending four-year institutions is to accelerate their degree by taking community college classes over the summer. These students are considered non-degree seeking at the community college and not counted as part of a cohort – thus, this important role of community colleges cannot be easily quantified and may be overlooked.
- **Institutional classifications:** One interviewee noted the need to change institutional classifications since a growing number of community colleges report as 4-year institutions, which can distort the graduation rates. This state recalculates the graduation rates for these institutions using Carnegie Classification (e.g., predominantly AA).
- **Data dissemination/display:**
 - Some thought some clarification to labels in the College Navigator would be helpful, for example, adding text to explain that graduation rates do not include transfers (explicitly “does not include transfer-ins” in addition to current “first-time” labels).
 - Others suggested improving the dissemination of IPEDS transfer-related data through comprehensive analyses and publications.
 - One interviewee suggested College Portrait as a model for the College Navigator to make the outcomes (including transfers) data easier to digest through improved visual aids.
- **Integrating data systems:** One interviewee suggested IPEDS work more closely with vendors such as Banner or Peoplesoft to help integrate data into IPEDS. Transfer data in particular “lives outside the [institutional] system,” and this interviewee suggested NCES work with NSC to automate the reporting of transfer student data.
- **Student Unit Record Data System:** One interviewee talked about the benefits of a national student unit record data system to track transfer activity and outcomes and how that would decrease the reporting burden on institutions but recognized this is not a likely possibility and beyond the scope of recommendations for this paper.
- **Net price/related reports:** One institution noted that because first-time students represent less than 10% of its population, measures that are used for reports, such as the College Affordability and Transparency Report, which relies on net price, can be

misleading. Because this college's first-time, full-time population is so small, one student can cause the change in net price to change drastically, and the report lists institutions with the largest net price increases, limited to the first-time, full-time cohort. This institution's representative recommended including transfer students in the net price calculation, which would entail changes to grant receipt and cost of attendance on the student financial aid and institutional characteristics surveys, respectively.

Recommendations

Based on information collected through interviews, as well as the literature review and database scan, the following appear to be the most important issues related to transfer representation in IPEDS with feasible adjustments noted:

1. **Clarify transfer-out definition:** NPEC members noted that since transfer-out does not include students who earned a credential, students who earn an associate's degree when transferring are currently excluded. Including students in both graduation and transfer rates, however, may lead to double-counting overall success rates. A simpler fix may be for IPEDS to clarify the transfer-out label on the GR and OM data on College Navigator and other types of dissemination and reporting to specify that transfer-outs who earned associate's degrees are only counted in the graduation rate, not the transfer rate.
2. **Add transfer items to Admissions survey:** Two interviewees recommended adding questions about transfer students to the ADM survey. Currently, the ADM survey does not collect any data about transfer students, and while the survey is not applicable to open-access institutions such as community colleges, transfer students are a growing population at 4-year institutions.
3. **Further disaggregate OM non-first-time by number of credits:** This was a common request from interviewees and appears to be important to distinguish a transfer student who took less than 12 credits from those who transferred more credits or completed an associate's degree before transferring. Institution and state-level analyses often compare the "native" versus transfer graduation rates and other outcomes based on a minimum number of credits (e.g., 60). It may be worthwhile as a discussion point for a future TRP to explore whether or not introducing this additional data point would impose excessive burden and at which points to delineate the number of credits. However, it should also be considered that institutions have already made several adjustments to accommodate changes to this survey component.
4. **Collect transfer-in and transfer-out by institution level (2- or 4-year):** Currently, the EF survey collects data on transfer-in students and GR collects data on transfer-outs, but the totals do not separate transfers by type of institution. It would be useful for researchers to know what type of transfer the student is making—from a 2-year to a 4-year, from one 4-year to another, etc. However, the burden on institutions and availability of this data for institutions that do not participate in NSC should be kept in mind, as should the availability of these types of data points from other sources and whether those are sufficient to answer research questions at the national level.

5. **Explore the possibility of a transfer-specific survey:** IPEDS has limitations in its capacity to collect information about transfer students due to its collection at the institution level and lack of both consistency in transfer definitions and capacity in transfer data collections across institutions. One interviewee suggested collecting student unit-record level data to better identify the unique patterns of transfer students. An alternative might be to administer an optional transfer-specific survey to answer questions not currently accessible through other federal datasets. The feasibility of, and interest in, such an option could be explored through a TRP.

FURTHER RESEARCH

NPEC members suggested investigating the following topics as potential transfer data collection points for IPEDS. However, these topics did emerge in interviews and would likely be better collected through other sources, unless IPEDS would like to consider a transfer-specific survey.

- **Swirling:** Institutions have seen an increase in swirling, or moving between multiple institutions over time, including students who earned credit while serving in the military or attending an online program. Getting this level of detail about students' movements among various institutions, however, would likely require a student record-level database and should be considered in the context of that discussion.
 - In addition to—or as part of—swirling, institutions noted an increase in trends such as delayed transfer and reverse transfer due to a host of students' financial and personal circumstances. Transfer patterns can be quite nuanced and not always a straightforward two-step path and would likely be difficult to capture at this level of granularity through IPEDS.
- **Articulation:** Information about articulation policies is currently collected in a state-by-state database via ETS. This is more suitable for a state-level database or an institution-level, policy-focused dataset that allows for open-ended text responses to explain the nuances of articulation agreements and any differences in articulation agreements by specific partnering institutions and programs.
- **Transfer admissions requirements:** Like articulation, this qualitative information would likely be best collected at the state level or in a policy database at the institution level. If components are uniform and comparable across institutions, it is possible that items could be added to the admissions survey component.
- **Retaking remedial coursework:** This topic could be addressed through a future paper and TRP dedicated to the topic of remedial coursework.

Conclusion

IPEDS currently has the capacity to answer fairly basic questions about transfer, particularly with the addition of the OM survey component. Institutions and states, however, seem to rely primarily on their internal data for detailed, disaggregated information about nuances in transfer student credits, patterns, experiences, and outcomes. Given the reliance on internal datasets, the current structure and limitations of IPEDS, the emergence of OM and non-federal student-level datasets, and the lack of recommendations by stakeholders for any major

modifications or additions to the current collections, it may be that a few small changes to clarify the collection and reporting of current transfer data are sufficient. While minor, these changes would allow for improved reporting of data without increasing reporting burden for institutions.

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Appendix A: Interview Protocol

Transfer Data Interview Protocol

Prepared by Coffey Consulting for NPEC-IPEDS

Thank you for taking the time to speak with us today. Coffey Consulting, an independent research firm, is conducting this research on behalf of the U.S. Department of Education's National Postsecondary Education Cooperative, or NPEC, to assess the current transfer landscape and how closely the IPEDS data collection reflect this landscape (specifically in the Admissions, Enrollment, Graduation Rates, and Outcomes Measure survey components). We would like to learn more about your institution's/state's transfer student data collections, reporting, and analysis activities, and any suggestions you have for improvements related to IPEDS data collections.

Do we have your permission to record this call? The recording will be used internally to ensure accuracy of notes and will be deleted after the final paper has been submitted. Your responses will remain anonymous; we will not name any institutions/individual respondents without permission in the final report.

Name:

Title:

Organization:

Transfer landscape

1. Please tell me more about transfer at your institution/system – would you say transfer is a part of the mission? Approximately what percentage of your students are transfers (in and out)?
2. What trends, if any, have you observed with transfer over the last 5-10 years – at your institution? State? Nationally? What do you think are the drivers of these trends?
 - *[prodding if needed: Growth/decline of students transferring-in and transferring-out, institution types where students are coming from and going, any specific partners]*

Internal Transfer reporting

3. How are transfer students (in and out) defined internally in your institution/state for data collection purposes?
 - Do you collect any information about sub-categories within transfer, for example by the originating or destination institution type? Do you collect any information about transfer-ins previous credits, degrees, or GPA? For transfers-out, do you track information about progress or outcomes at the receiving institution?

- How are these data used internally? What types of analyses do you conduct? Do you receive any requests for reporting on transfer students? *(If so, please describe.)*
- 4. Do you report on transfer students to any external entities other than NCES (state agencies, foundation initiatives, etc.)? If so, how do these datasets define/categorize transfer students?
 - Do you track transfer student outcomes through the National Student Clearinghouse? For transfers-in, out, both? Do you receive only the NSC enrollment data or both enrollment and degree data from NSC? How do you use these data for internal/external reporting?
 - Do the external datasets' transfer definitions align with those of your institution/state? If not, what adjustments do you make? Please describe.

IPEDS Transfer data collection

- 5. Have you experienced any challenges identifying and reporting transfer student enrollments/outcomes to IPEDS with your existing data systems? Please describe.
- 6. How could IPEDS survey components be improved to allow for more accurate reporting of transfer student enrollments and completions at your institution/state? *(What changes, if any, would you make to the questions, definitions, or instructions of the following):*
 - Admissions
 - Enrollment
 - Graduation Rates
 - Outcome Measures
- 7. Are you familiar with the IPEDS Outcomes Measures (OM) survey? (new as of 2015-16)
 - Do you feel the addition to OM helps to better represent transfer students at your institution/state?
 - Have the results from the OM survey been used/referenced in conversations at your institution/state? *(If so, please describe.)*
 - How could it be improved?
- 8. *For all suggested changes:* Which changes do you think are the most important/worth the additional burden to better represent transfer students at the national level? *Please consider both the continuity and transparency of data, and the 3 groups defined as users of data by NCES: consumers/students, researchers, and policymakers.*

Conclusion

- 9. In summary, do you feel that IPEDS accurately reflects today's higher education transfer student landscape at your institution/state? Nationally? Are there any other changes you would make?
- 10. Is there anything else you would like to add?

Thank you for taking the time to share your insights and knowledge; your responses will help inform this important work. May we contact you with any follow-up questions if we need any additional information? Can you please send any existing documentation about transfer definitions at your institution/state? We will be sure to share the final, published report with you. As noted earlier, all responses will remain anonymous. No identifying information will be used.