Too Late? Too Little:
The Timing of Financial Aid Applications

Russell Cannon
&
Sara Goldrick-Rab

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Introduction

The Free Application for Federal Student Aid (FAFSA) plays a critical role in access to higher education, especially for students from low- and middle-income families. Whether from the federal government, states, or individual institutions, the FAFSA is the gateway through which need-based financial aid flows, and there is a documented connection between grant aid and college success (Goldrick-Rab, Kelchen, Harris & Benson, 2016; Novak and McKinney, 2011; King, 2004; Cochrane, 2007). This is why there is a national push for all students to file the FAFSA. In the last year, President Obama took action to make it easier to file the FAFSA by allowing information on income and assets to come from year-old rather than most recent tax returns (The White House, 2016; NACAC, 2016). This reform is intended to increase both the number of filers and the timeliness of filing (Hopkins, 2014).

When a FAFSA is filed matters. While federal Pell Grants are awarded as long as the FAFSA is filed by the summer following the funded academic year, most state and institutional grants have limited funding and specific deadlines that fall more than a year earlier. If students file after these deadlines, or if funding runs out before they file, they receive less aid. This study uses new data to describe the prevalence of such "under-filing." We estimate that 46% of Pell Grant recipients living in states with deadlines or known suspension dates for need-based grants under-file the FAFSA, submitting the form after those deadlines have passed.

Why Under-Filing the FAFSA Is a Problem

The price of higher education is at an all-time high; between 2000 and 2015, the cost of attendance at public four-year colleges rose nearly fifty-three percent in inflationadjusted dollars (Baum and Ma, 2014). This increase coincided with drastic reductions in state appropriations to higher education during the most recent recession. Although state support has been "on the rise" since 2013, the magnitude of the record funding decreases between 2009 and 2012 paired with a growing number of students attending postsecondary education has meant that per-student funding from states remains more than 15% below pre-recession levels ($6,966 in 2015 vs. $8,220 in 2009 and $8,868 in 2000 in constant dollars) (Wexler, 2015; Carlson and Laderman, 2015). This same period has also seen a significant decline in median household income, from $57,724 in 2000 to $53,657 in 2014 (Federal Reserve Bank of St. Louis, 2015). Together, these factors combine to make need-based grants an increasingly vital mechanism for ensuring access to college for students from low- and middle-income families.

Obtaining grants is not easy, however. One reason is that with few exceptions, the federal government, states, and most public institutions require the annual completion and timely submission of the Free Application for Federal Student Aid, or FAFSA. Completion of the FAFSA is a complex process that research has shown to create barriers to both college access and college persistence (King, 2006; Dynarski and Scott-Clayton, 2006; Bettinger et al., 2009; Bird and Castleman, 2014; Novak and McKinney, 2011; Goldrick-Rab, 2016). Students struggle with the difficulty of specific steps of the process as well as with planning and motivation. In addition to the policies associated with federal aid, students must also understand policies specific to their state and institution, creating opportunities for confusion and under-informed decision-making.

Though piecemeal improvements have been made to the FAFSA in recent years, its remaining complexities are well documented and include the length of the form, the number of separate sources needed, the difficulty of obtaining those sources, and the amount of mathematical calculation required (Dynarski and Wiederspan, 2012; Bettinger et al., 2009; Wisconsin HOPE Lab, 2015; Dynarski and Scott-Clayton 2006). Challenges arising from intermediate filing deadlines have not been as well explored, perhaps in part because the deadlines and their impacts occur at the state and institution level and, as such, cannot be adequately explored using the large federal datasets currently available to researchers.

Grants appear to be an increasingly preferred strategy among states for distributing funding to higher education. Despite the decline in state appropriations to postsecondary institutions from $85 billion to $79 billion between 2008 and 2011, funding for state grant aid actually increased, from $8.4 billion to $9.2 billion. While the average need-based award varies by state, for eligible students the combination of state and institutional grant aid can account for more than half of their total grant aid package. A recent study on financial aid outreach at the University of Missouri provides an example of the relative contributions of institutional, state, and federal grant aid towards total tuition and cost of attendance (Table 1) (Cannon and Goldrick-Rab, forthcoming).

Table 1. Tuition and Cost of Attendance (COA) Covered by Aid Awards to Pell-Eligible Students at the University of Missouri

	Dollar Value	% of Tuition ($10,286)	% of Total COA ($24,704)
Aid tied to March 1 Institutional Priority Date: Average institutional grant + Federal Supplemental Equal Opportunity Grant	$2,800	27%	11%
Aid tied to April 1 State Priority Date: Average Access Missouri state grant	$1,500	15%	6%
Maximum Pell Grant	$5,730	56%	23%
All aid tied to priority dates + Maximum Pell Grant	$10,030	98%	41%

Source: Cannon and Goldrick-Rab, forthcoming.

However, funding for higher education remains limited and is particularly vulnerable to cuts in times of economic hardship (Baum et al., 2012). Further, while the federal government responded to the growing enrollments with large increases in Pell Grant awards, funding at the state level has not kept pace (CBO, 2013, Carlson and Laderman, 2015). For this reason, most states use some form of deadline or priority date as a way to ration flow of need-based grant aid within budgetary limits. These take three primary forms, each with particular challenges.

Among the fifty states and Washington, D.C., the largest group (thirty states in 2014-15) provide explicit deadlines. With the exception of New York, which aligns its deadline with the federal deadline of June 30th *following* the funded year, nearly other state with a deadline requires students to file in the spring or summer *prior* to the funded year.[1] On average, state deadlines fall more than four hundred days before the federal deadline (see Table 2) and often do not align with institutional aid deadlines, creating communication challenges and increased complexity. States with deadlines typically commit to provide aid to all students filing before the deadline. Total funding dedicated to student aid is often set in advance, leading these states to reduce average award amounts if applicants exceeds budgeted estimates.

A second set of states guide students to apply “as soon as possible after January 1,” referring to the January preceding the funded year, the first day students are able to apply. This new form of guidance has arisen in only the past five years and has now been adopted by six states.[2] In these states, there is often a set pool of dollars and need-based grant aid is allocated until this pool is exhausted. Among the states with this policy, Illinois is the only state that publishes its “depletion” or “suspension” date, the date at which further applications are no longer funded without appeal. Since the inception of the policy, the depletion date has moved progressively earlier each year; in 2014-15 it fell on February 28, a date that falls before most state deadlines. While Illinois provides the previous year’s depletion date to applicants as well as a projection of the depletion date for the coming year, the other states with this policy do not appear to provide this additional guidance (ISAC, 2016). As a result, students must file without knowing their likelihood of receiving state aid, or may incorrectly assume that federal or institutional deadlines are their best guides (Feeney and Heroff, 2013). In these states, if more students file than anticipated, the funds are exhausted earlier.

Finally, fifteen states provide students with guidance to “check with your financial

[1] Ohio and Minnesota have deadlines in October of the funded year.
[2] Illinois was the first state to adopt this filing guidance for the 2010-2011 FAFSA.

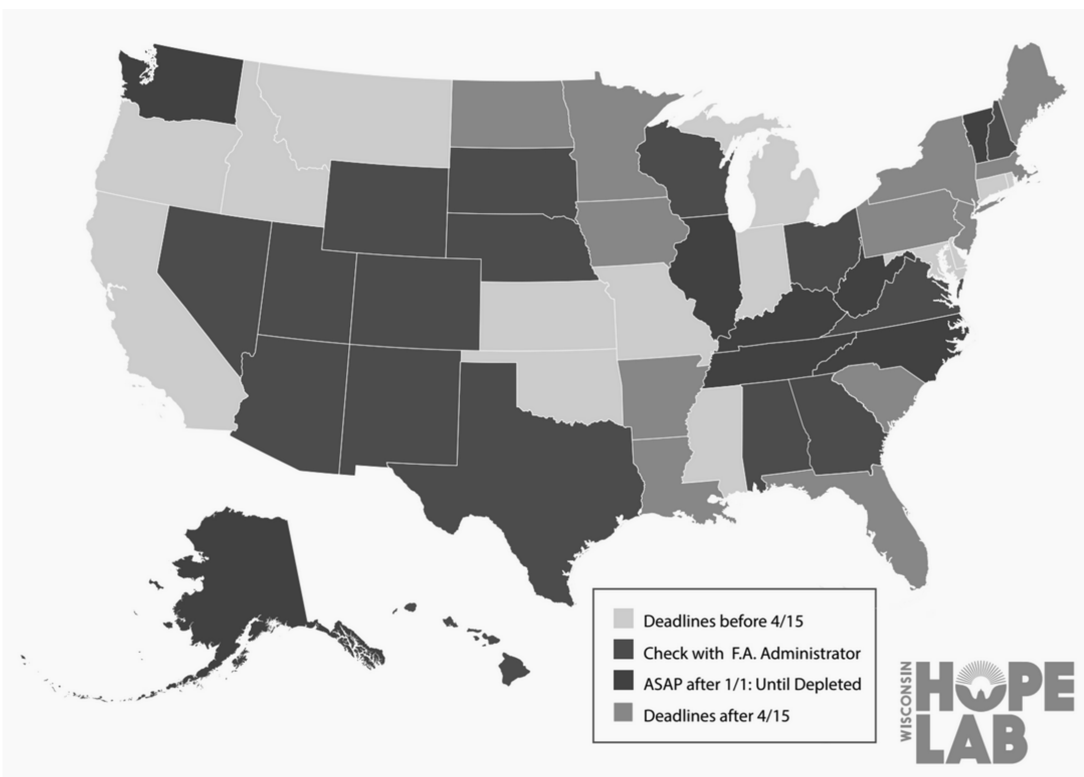
aid administrator." Often in these states, aid awards are disbursed by the state to individual institutions or institutional sectors within the state. Those institutions may then follow a policy of either setting deadlines, and, like the first set of states, adjusting award amounts based on the date of application or, like the second set of states, offer aid on a rolling deadline until it is depleted. Recent research by the Wisconsin HOPE Lab provides an illustrative example with the Wisconsin Grant. Funds for the grant are dispensed separately to the state's tribal colleges, technical colleges, private non-profit colleges, and the campuses of the University of Wisconsin; each then dispenses the funds to aid applicants on a rolling basis until the funds are exhausted. Each sector sets separate eligibility requirements and runs out of dollars at different dates (Anderson and Goldrick-Rab, 2016). Other states, such as Arizona, allow individual institutions to determine distribution policies, which may include either institution-level deadlines or a rolling deadline that continues until funds are exhausted (Osborn, 2014). While these policies provide more institutional discretion, they also complicate communication to students about the implications of when they file.

In many ways these latter two sets of policies may be the most challenging to students because they provide the least amount of information to filers and may have the earliest effective deadlines. That same complexity extends to research; it is impossible to examine exactly how many eligible students do not receive aid in these states. An analysis of students who miss filing deadlines in states where they are explicit, then, may significantly under-estimate the number of students missing effective filing deadlines in states with guidance to files "as soon as possible after January 1" or "check with your financial aid administrator." Similarly, nearly all institutions maintain separate deadlines for institutional aid that often fall even earlier than state deadlines. A recent study at the

University of Missouri found that while a sixth of eventually filing Pell-eligible students filed after an April 1 state deadline, more than a third missed an earlier March 1 institutional deadline (Cannon and Goldrick-Rab, forthcoming).

Figure 1 below illustrates the distribution of these policies across the states as of 2014-15. Because gathering final tax information has been cited as a challenge to filing (Wisconsin HOPE Lab, 2015), states with deadlines are broken out to highlight those with filing deadlines before April 15 (the federal tax filing deadline that year) and those with deadlines on or after 4/15.

Figure 1. FAFSA Filing Guidance Provided to Students in 2014-15, by State



State deadline policies have also become more challenging for students. A comparison of state FAFSA filing guidance for 2014-15 with the official guidance from 2004-05 reveals that of the fifty states and Washington D.C., four states have added deadlines since 2004 (USDOE, 2003; USDOE, 2013). Six states that already had deadlines moved their deadlines to an earlier date while five states moved their deadlines to a later date. However, an additional six states switched to a policy of encouraging students to file “as soon as possible after 1/1,” a form of guidance that was not provided at all in 2004-05; as noted above, this shift adds a greater level of uncertainty for students and may result in actual cutoff dates that are earlier than most published state deadlines. This suggests that, while not universal, there has been a general trend towards adding deadlines or moving deadlines earlier, putting more students at risk for loss of aid from filing after these cutoffs. Figure 2 illustrates these shifts in policy and Table 2 notes the shift towards earlier filing deadlines among those states with deadlines, both as a raw average across states and weighted based upon the number of filers in each state in 2014-15. While limited, state-level analysis from Illinois and Wisconsin suggests that in states that dispense aid on a rolling basis funding is exhausted (either at the state level or by individual institutions), there has been a similar if not more accelerated pattern of running out of aid earlier each year (Anderson and Goldrick-Rab, 2016).

Figure 2. Shifts between 2004-05 and 2014-15 in State Aid Deadline Policy, by Number of States

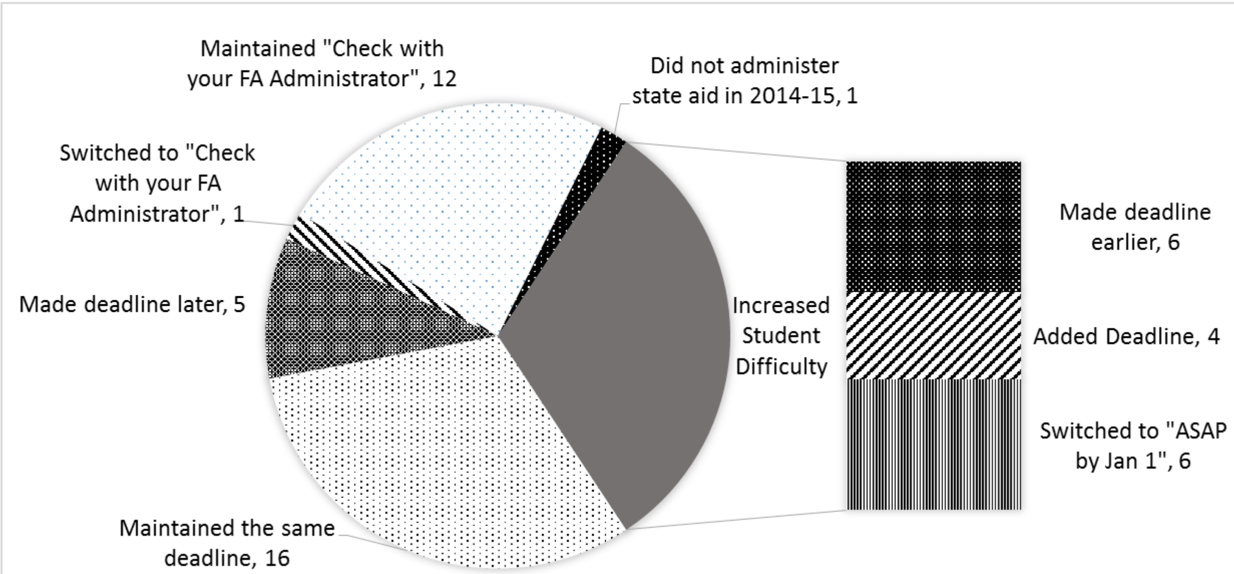


Table 2. Average State Deadline and Number of Days Before Federal Deadline

	2004-05	2014-15
Average Date	May 22nd	April 23rd
Average Date (Weighted)	June 9th	May 23rd
Average Days before Federal Deadline	403.87	432.11
Average Days before Federal Deadline (Weighted)	385.03	402.89

Studies of single programs and qualitative studies suggest that large numbers of students may miss intermediate deadlines and priority dates tied to state and institutional need-based aid, even though they eventually file (Cochrane, 2007; Lamanque, 2009; Feeney and Heroff, 2013). However, attempts to gauge the scale of the issue at the national level have been limited by the use of datasets not well suited to the analysis and methodological decisions of the authors.

King’s widely-cited 2004 study examined a descriptive analysis of filing data from the National Postsecondary Student Aid Survey (NPSAS) 1999-2000 and used April 1 as a proxy for state financial aid deadlines; King writes that “in most states [the state priority deadline] is April 1” (7). Yet while the majority of states and Washington D.C. have specific deadlines prior to the federal deadline, only one state, Missouri, had a deadline of April 1 in the year of King’s data sample (USDOE, 1998). Using King’s methodology, students missing deadlines in states with deadlines falling before 4/1 are counted as “on-time” filers if they file before 4/1, while students in states with deadlines that fall after the 1st who file after 4/1 but before the state deadline will be counted as missing the deadline. Novak and McKinney’s recent attempt to update King’s findings uses the Beginning Postsecondary Study (BPS 04/09), and, thus, necessarily focuses only on first-time filers. The authors attempt to be more exact than King by taking into account specific state deadlines, although because BPS only provides the month of filing the authors use the “conservative” approach of setting the cutoff as the month following the deadline for the deadlines occurring after the first of the month (2015). Both King and Novak and McKinney’s studies include all students who file a FAFSA, even though many of these students would not meet the low-income eligibility requirements for need-based aid. Most importantly, both NPSAS and BPS are representative nationally but *not* at the state level[3], and so are not appropriate sources for examining trends and subgroup variation in policies that occur at the state level (Riccobono et al., 2002; Wine et al., 2011).

Because the term “late-filing” is sometimes used in the financial aid profession to describe students who attempt to file after the final federal deadline, in this paper we adopt the term “under-filing” to describe students who file the FAFSA in time to receive

[3] BPS 04/09 was constructed to be representative at the state level for 12 states, but McKinney and Novak do not limit their analysis to these states.

federal aid but after deadlines for institutional or state grant aid for which they would have otherwise been eligible. The primary goal of this paper is to examine the extent of under-filing nationally, relative to state deadlines. We also seek to examine variation in rates of under-filing among different groups of students.

While limited, the existing research on non-filing and under-filing behavior suggests that they occur most frequently among already disadvantaged students, including those who identify as underrepresented racial or ethnic minorities[4], have no parent with a four year degree ("first generation"), or hail from low-income families (Feeney and Heroff, 2013; LaManque, 2009). These same students are more likely to drop-out of higher education and to take longer to graduate (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Sirin, 2005). Non-filing rates also appear highest among students at community colleges, which often have fewer supports (Bird and Castleman, 2014; Feeney and Heroff, 2013; LaManque, 2009).

Estimating Under-Filing the FAFSA

How many students miss out on grant aid because they under-file? While interventions such as nudging via text-message are being put into place to tackle this problem (Castleman and Page, 2016; Cannon, forthcoming), and the recent "prior-prior year" reform is intended to address it (White House, 2016), the scope of the challenge has not been quantified. However, the U.S Department of Education's Office of Federal Student Aid (FSA) collects student-level FAFSA filing data. While summarized versions of filing trends have been made available at the state and high school level at arbitrary

[4] Under-represented minority is typically defined as students who identify as either Hispanic, Black, or Native American (alone or in combination with other races/ethnicities).

dates, these disclosure dates have not aligned with state filing deadlines that would allow for state-level analysis, and student-level information that would allow for subgroup analysis is not typically made available to researchers. Therefore, in August 2015 we submitted a Freedom of Information Act request to the Office of Federal Student Aid requesting the 2014-15 on-time filing rates of Pell-eligible students.

Students in this sample met the following criteria: (a) submitted a FAFSA for attendance in the fall of 2014/15, (b) were Pell eligible[5] and (c) reported a state of legal residence as one of the thirty-one states with a filing deadline or known cutoff date in that cycle. Filing "on-time" was defined as filing by or before the date of the deadline, with all students filing after the deadline coded as under-filers. For states listing multiple deadlines, the earliest deadline associated with a major need-based aid program was selected as the cutoff date.

This analysis addresses several of the challenges faced by previous attempts to quantify under-filing. First, because the source data is at the individual level and includes the exact filing date, the analysis is able to examine the actual filing date relative to the actual state deadline (or the closest possible approximation). Second, the sample includes a broader range of students than Novak and McKinney's (which only examined first-year students), while also focusing on the sub-group of students most likely to be eligible for need based aid. Finally, by analyzing the complete sample population, this analysis is able to provide conclusive evidence on the extent of the problem at both the national and state levels.

The FSA provided two pieces of information. The first shows the number of

[5] Pell-eligible students were chosen as the group of interest because, by definition, they have a significant level of financial need and are thus most likely to be eligible for need-based state aid.

students filing after state deadlines or explicit cutoff dates, by state. The second focuses on the on-time filing rates by institutional type and student characteristics. Institution type includes four-year, two-year, and less-than-two year institutions within each of the public, private, and proprietary sectors. Student characteristics are limited to those available from the FAFSA application and focused on those hypothesized from existing research to place students at greater risk for missing state deadlines. These included expected family contribution, whether or not the student was filing for the first-time, parental education,[6] dependency status, and sex.

We conduct a separate, similar set of analyses for the five additional states providing guidance to “file as soon as possible after January 1” but not publicizing a cutoff or suspense date. For this analysis, we estimate under-filing using April 15, the federal tax-deadline, as an arbitrary cutoff (Appendix A).

A key limitation to our approach is that we likely *understate* the extent of under-filing because we only examine state deadlines. Institutional deadlines often fall before state deadlines, and single-institution studies suggest that the proportion of students missing these earlier deadlines is often higher. Similarly, we are only able to examine states with explicit deadlines or cutoff dates, although information on filing rates in Illinois provide a helpful illustration of how filing rates may play out in states with guidance to file “As soon as possible after January 1” or “Check with your financial aid advisors.” Thus, we believe our results are conservative estimates.

[6] Applicants who reported an education level of “college or beyond” for at least one parent are defined as “Not First Generation.” All other are defined as “First Generation.”

Prevalence of Under-Filing the FAFSA

Nearly half (45.6%) of Pell-eligible students living in states with deadlines or known suspension dates for need-based grants under-file the FAFSA, submitting it after those deadlines have passed (Table 3). On-time filing rates vary by type of institution, with students at two-year and less than two-year institutions in both the non-profit and public sectors under-filing at rates roughly twenty percentage points higher than their counterparts in four-year institutions. Students at proprietary institutions under-file most often, with 60% of students at both four-year and two-year proprietary institutions filing after their respective state deadlines, compared to 31% and 52% of their peers at public four- and two-year institutions, respectively.

Under-filing is more common for some groups of students than others. While all students in the sample are Pell-eligible, those with the lowest expected family contributions ($0) are nearly nine percentage points more likely to under-file than their peers with an EFC greater than zero. This means that the students with the greatest need for grant aid may be the most likely to miss out on it. Men are more likely to under-file than women, and students whose parents have not attended college are more likely to under-file than peers with a college-educated parent, but these differences are relatively small (1.1 and 2.6 percentage points, respectively).

However, students classified as independent for financial aid purposes—those with children, over age 24, or otherwise on their own for paying for college—are far more likely than dependent students to under-file. Almost 55% of independent students file after state deadlines, compared to about 32% of dependent students. Since all students in this sample are Pell-eligible, it is safe to assume that they would qualify for state aid—their under-filing is unlikely to reflect ineligibility or lower need for aid, as has been suggested by earlier researchers (King, 2004).

Finally, the vast majority of FAFSA-related support is targeted at first-time filers, and, indeed, these students are seven percentage points more likely than re-filing students to under-file. However, it is notable that 44% of students who already successfully submitted a FAFSA in a previous year and nearly 38% of students simply renewing their FAFSA at the same institution failed to meet state deadlines, suggesting the need for outreach and support efforts directed towards all students – not just new filers.

Table 3. 2014-15 FAFSA Under-filing Rates of Pell-eligible Applicants in States with Explicit Deadlines or Cutoff by Institutional and Student Characteristics

	Filing After Deadline	
	Count	Percent
Overall	**3,596,214**	**45.6%**
*School Type/Length**		
Public	**2,348,954**	**43.2%**
4 Year Institutions	739,108	31.5%
2 Year Institutions	1,589,815	52.2%
Less than 2 Year	20,031	50.5%
Private	**382,179**	**36.2%**
4 Year Institutions	345,568	34.8%
2 Year Institutions	30,073	57.2%
Less than 2 Year	6,538	54.5%
Proprietary	**858,252**	**62.0%**
4 Year Institutions	490,645	60.3%
2 Year Institutions	205,927	60.3%
Less than 2 Year	161,680	70.5%
Foreign/Other	6,829	43.3%
Student Characteristics		
EFC=0	2,565,443	48.4%
EFC>0	1,030,771	39.8%
Original Application to Institution	2,062,741	54.1%
Renewal	1,533,473	37.6%
First Time Filer**	950,784	51.1%
Not First Time Filer	2,645,430	43.9%
First Generation***	2,221,249	46.6%
Not First Generation	1,374,965	44.0%

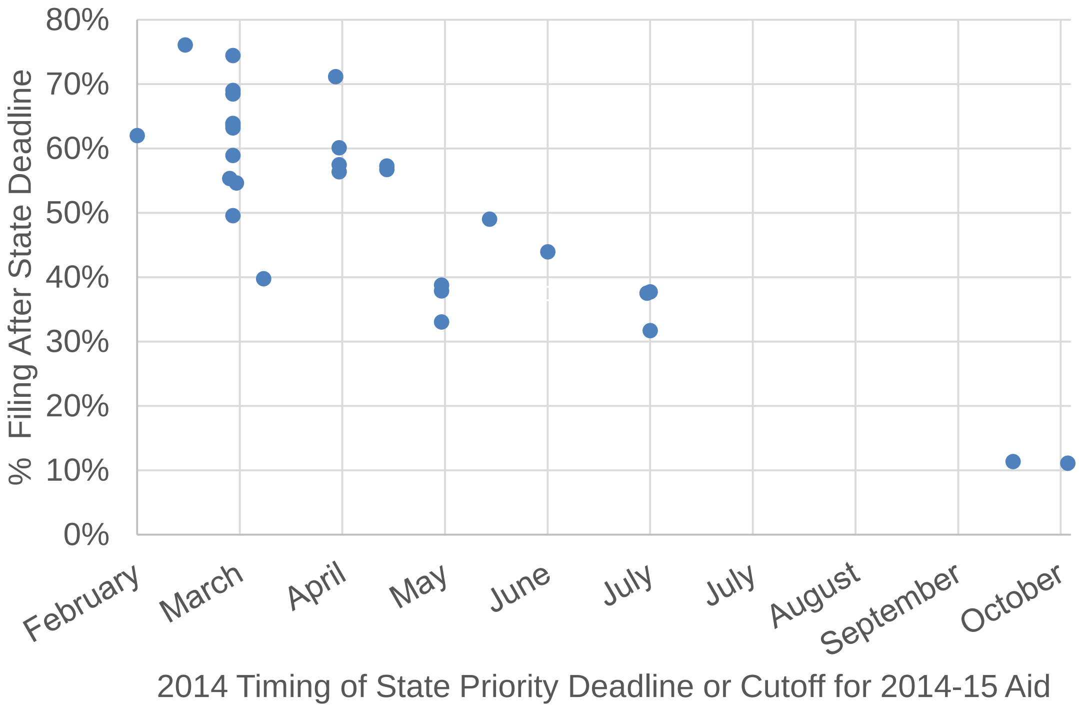
Table 3, Continued

Dependent	1,023,528	32.3%
Independent	2,572,686	54.5%
Female	2,183,771	45.1%
Male	1,397,823	46.2%
Blank	14,620	61.1%

Notes: * Applicants can list up to ten schools on applications. Institutional control and length are based on first reported institution on student's last transaction.
**Applicants who previously had submitted an application between cycles 2006/07 to 2013/14 are defined as "not first time filer." All others are "first time filer."
***Applicants who reported an education level of "college or beyond" for at least one parent are defined as "Not First Generation." All are "First Generation."

There is also a great deal of state variation in under-filing (Table 4). Rates range from 76.1% in Connecticut and 74.4% in Oklahoma to 0% in New York and 11.1% in Ohio. There is a clear correlation between under-filing rates and priority date (Figure 3); states with later deadlines tend to have much lower rates of under-filing. Connecticut and Oklahoma have respective priority dates of February 15th and March 1st, two of the earliest in the country, whereas New York is the only state where the state deadline matches the federal deadline) and Ohio has the second latest filing date. Yet there is also variation in under-filing even among states with the same deadlines. For example, under-filing rates in states with March 1 filing dates range from Connecticut's 76.1% to 49.5% in Rhode Island.

Figure 3. Percentage of 2014-15 Pell Recipients Submitting FAFSA after State Deadline by Timing of Deadline



Note: New York, which had a priority date of 6/30/2015 and a 0% under-filing rate, is not shown for simplicity

Illinois was the only state included in the analysis that recommended that students apply “As soon as possible after January 1” rather than providing an explicit deadline. For the analysis, the state’s suspension date of February 28, 2014 was used as the cutoff; were this deadline explicitly stated to students, it would have been the third earliest among all published deadlines. Not surprisingly, then, Illinois had an under-filing rate (55.3%) significantly above the national average. This places it in line with our estimated under-filing rate of 52.5% for other states with “as soon as possible” guidance, based on a proxy cutoff of April 15 (Appendix A).

Table 4. Pell Eligible Under-filing Rates by State among States with Explicit Deadlines or Cutoff

	Filing After Deadline			
State	Count	Percent	Deadline	Notes
Alaska	7,207	37.5%	6/30/2014	
Arkansas	54,356	43.9%	6/1/2014	
California	949,656	54.6%	3/2/2014	“For initial awards-3/2” also “Contact your financial aid administrator”
Connecticut	80,626	76.1%	2/15/2014	
Delaware	16,439	56.7%	4/15/2014	
Florida	436,366	49.0%	5/15/2014	
Idaho	44,402	68.5%	3/1/2014	
Illinois	253,758	55.3%	2/28/2014	"ASAP after 1/1"; Feb 28 "suspense date" for 2014-15
Indiana	104,320	39.8%	3/10/2014	
Iowa	27,813	31.7%	7/1/2014	
Kansas	56,146	60.1%	4/1/2014	
Louisiana	69,830	37.7%	7/1/2014	"June 30 2015, July 1 2014 recommended"
Maine	13,873	33.1%	5/1/2014	
Maryland	118,991	58.9%	3/1/2014	
Massachusetts	68,924	37.9%	5/1/2014	
Michigan	287,727	69.0%	3/1/2014	
Minnesota	18,362	11.3%	10/15/2014	Estimate; Policy is "30 days after start of term"
Mississippi	112,064	71.1%	3/31/2014	
Missouri	126,743	56.4%	4/1/2014	
Montana	18,833	63.9%	3/1/2014	
New Jersey	104,233	37.4%	6/1/2014	Deadline for need-based grant recipients; all others 10/1
New York		0.0%	6/30/2015	
North Dakota	8,097	57.3%	4/15/2014	

Table 4, Continued

Ohio	47,141	11.1%	10/31/2014	
Oklahoma	97,808	74.4%	3/1/2014	
Oregon	98,400	62.0%	2/1/2014	
Pennsylvania	141,346	38.8%	5/1/2014	8/1 for first-time filers at some institutions. All others 5/1
Rhode Island	17,445	49.5%	3/1/2014	
Tennessee	165,367	63.2%	3/1/2014	
Washington, D.C.	12,065	57.5%	4/1/2014	
West Virginia	37,876	63.6%	3/1/2014	

Discussion

Data requested from the FSA and analyzed here reveals that very large proportions of Pell-eligible students are under-filing in states with explicit deadlines. Limited evidence from Illinois and Wisconsin paired with our own estimates in Appendix A suggest that rates are as high (if not higher) in states with guidance to file “as soon as possible after 1/1” or to “check with your financial aid administrator.” Furthermore, these deadlines appear to have a disproportionate impact on subgroups of students already at higher risk of not persisting, including students at two-year institutions, students from the lowest-income families, independent students, and first generation students. Several implications for outreach, policy, and research follow from these findings.

Since FAFSA deadlines affect a large number of students and disproportionately affect at-risk students, more efforts should be undertaken to encourage on-time filing. Institutions have the clearest incentives to encourage filing by state deadlines; each student receiving aid from the state reduces the aid burden on the institution and increases the likelihood of retention. Institutions may also be best equipped to communicate to students about both state and often different institutional deadlines, as well as more likely to be able to provide some form of in-person support to students struggling with the process.

Although most institutions likely already have a communication plan in place that provides students with information on institutional, state, and federal aid deadlines, these plans typically rely only on e-mail, an increasingly unreliable way to contact students given decreases in how often students engage with e-mail and exponential increases in the number of emails received by students (Anderson and DePalma, 2012). Recent research has taken advantage of advances in behavioral economics and an increase to nearly 100% mobile-phone ownership among college-age students to examine the impact of phone-based outreach to students. A series of FAFSA-focused text message-based interventions have been shown to increase fall retention at community colleges (Castleman and Page, 2016) and a single call from a peer advisor in an office of financial aid was been shown to increase the on-time filing of Pell-eligible students from 68% to 77% while also increasing overall filing for students with a zero EFC from 89% to 94% at a flagship public university (Castleman and Page, 2016).

The federal government has recently taken the important step of allowing students to use a prior year's tax return, allowing students to file even earlier. Some commentators have suggested that this may help to reduce under-filing (Hopkins, 2014). However, simply *allowing* students to file earlier may not address the challenges noted here. It may not simply be the obstacle of obtaining tax information that causes students to file late; even in the current policy setting, students are able to successfully file by providing estimates of their tax information as long as the information is later updated. Further, it is unclear which students will take advantage of this earlier filing opportunity; without addressing the communication challenges noted above, it is possible that this new option may be used most widely by students who are the least at risk and have the lowest eligible levels of financial need.

Finally, the policy behavior of states is also an important general consideration in considering recommendations at the federal level. We have already noted the complexity faced by student filers in states that encourage filing “as soon as possible after January, 1,” and the national trend towards recommending that students apply as close as possible to January 1, currently the earliest allowable date to apply. It is possible, then, that states may respond to this new federal option by encouraging students to file as soon as possible after the *new* earliest possible date, likely in October of the previous year. This, in effect, would likely move back the date when funds are exhausted while requiring students to make decisions about their fall enrollment almost a full year in advance of their attendance and nearly two years in advance of the federal financial aid deadline. At that distance, students face not only cognitive challenges to planning but practical ones; graduating high school seniors and students considering a transfer from community college to a four-year institution may still be unsure of their plans well into the spring or summer before the funded year.

Even if interventions are successful, then, it may not be enough simply to get more students to file before deadlines. Whether negative impacts on subgroups of students are intentional, the role of deadlines in limiting the total amount of aid distributed often is. In most states, funding for need-based aid is a zero-sum game; a specific number of dollars are allocated, and states either decrease average aid awards or stop awarding funds earlier to make sure that allocations stay within budget. The ideal would be for states to simply budget more dollars to appropriately fund the number of enrolled students *eligible for aid*, rather than the number of students *expected to apply on time for aid*, and incentivize awarding the maximum number of eligible students. Yet as many states continue to fail to match pre-recession levels of per-student allocations to higher education, this is unlikely in the short term.

As a general rule, the later a state deadline, the higher the on-time filing rate for that state; where possible, states should consider moving deadlines closer to the federal filing deadline of the summer following the funded year. While later late state deadlines may result in lower average award packages without appropriate planning, they also are more likely to surface the number of eligible students and to incentivize more careful targeting based on levels of need rather than the timing of filing.

States and institutions alike, then, have a responsibility to understand how their aid is currently targeted, and they must include in that calculus not only need-based requirements for eligibility but the disproportionate impacts of policies like deadlines on filing behavior and actual aid distribution. This research requires data. While we are grateful to FSA for providing the descriptive analysis considered here, the findings suggest that there is value in more granular analysis by providing de-identified student-level data to qualified researchers, allowing for analysis that considers a broader range of questions, including the impact of institutional deadlines. State agencies and researchers at individual institutions may also be well-equipped to conduct research on filing behavior and outreach options that are effective in reaching students who are most at risk for under-filing. While only a piece of a larger puzzle, tackling under-filing is a crucial step towards helping to make college accessible and students successful.

Appendix A. Timing of FAFSA Filing in States Advising Students to File "As Soon As Possible After January 1" and Not Providing Explicit Cutoff Dates

As with the deadline-based analysis, students were selected for inclusion in the sample if they a) submitted a financial aid application (FAFSA) for attendance in the fall of 2014/15 and b) were determined to be Pell eligible.[7] Unlike the broader analysis, students in this group also c) had reported a state of legal residence as one of the 5 states that provided filing guidance of "As soon as possible after January 1" but did not provide after-the-fact cutoff or suspension dates.

For this group, April 15, the federal tax-deadline, served as an arbitrary cutoff. Filing "on-time" was defined as filing by or before April 15, with all students filing after the deadline coded as under-filers. For states listing multiple deadlines, the earliest deadline associated with a major need-based aid program was selected as the cutoff date.

Total rates of non-filing follow a pattern similar to the overall group (52.5% under-filing vs. 46.5% under-filing). Similarly, trends observed in subgroups of institutions and students largely mirror those of states with deadlines. Notably, under-filing rates were higher for all at-risk groups, and the gap between the at-risk student group and their less at risk peers was larger for students with an EFC of zero, males, and first-generation students.

[7] Pell eligible students were chosen as the group of interest because, by definition, they have a significant level of financial need and are thus most likely to be eligible for state need-based aid.

Table A1. Estimated Pell Eligible Student FAFSA Under-Filing Rates by States Advising Students to File "As Soon as Possible After January 1" without Explicit Cutoff Date (4/15 as Proxy)

State	Count	Percent	Proxy Deadline
Kentucky	78,899	44.0%	4/15/2014
North Carolina	244,071	57.1%	4/15/2014
South Carolina	127,477	62.1%	4/15/2014
Vermont	6,123	43.2%	4/15/2014
Washington	103,649	43.2%	4/15/2014

Table A2. Estimated Pell Eligible Student FAFSA Under-Filing Rates in States Advising Students to File "As Soon as Possible" (4/15 Proxy) by Institutional and Student Characteristics

	Filing After Deadline	
	Count	Percent
Overall	560,219	52.5%
*School Type/Length**		
Public	**371,768**	**49.5%**
4 Year Institutions	105,937	34.4%
2 Year Institutions	265,712	60.0%
Less than 2 Year	119	63.0%
Private	**60,655**	**46.6%**
4 Year Institutions	53,239	44.5%
2 Year Institutions	6,336	69.4%
Less than 2 Year	1,080	74.1%
Proprietary	**126,985**	**69.4%**
4 Year Institutions	98,719	68.7%
2 Year Institutions	15,221	68.9%
Less than 2 Year	13,045	75.6%
Foreign/Other	811	42.5%
Student Characteristics		
EFC=0	410,012	55.3%
EFC>0	150,207	46.3%
Original Application to Institution	333,897	62.4%
Renewal	226,322	42.6%
First Time Filer**	153,150	62.0%
Not First Time Filer	407,069	49.7%
First Generation***	331,394	54.3%
Not First Generation	228,825	50.1%

Table A2, Continued

Dependent	137,235	39.0%
Independent	422,984	59.3%
Female	352,324	52.0%
Male	205,646	53.3%
Blank	2,249	69.3%

Notes: * Applicants can list up to ten schools on applications. Institutional control and length are based on first reported institution on student's last transaction.
**Applicants who previously had submitted an application between cycles 2006/07 to 2013/14 are defined as "not first time filer." All others are "first time filer".
***Applicants who reported an education level of "college or beyond" for at least one parent are defined as "Not First Generation". All are "First Generation."

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