

Building a Multistate Data Exchange: It Can Be Done

State Longitudinal Data Systems:
Driving Educational and Workforce Decision Making
New England Board of Higher Education
October 16, 2014 ~ Weston, MA

Overview

- Background and justification for exchanging data across state lines
- Process for developing WICHE's pilot multistate longitudinal data exchange
- Results
- Lessons learned
- Next steps

Efforts to Measure Return on Investment

- Gainful employment
- *Student Right to Know Before You Go Act*
- President Obama's college ratings
- collegemeasures.org

Generally, these are aimed at accountability or consumer information, with not much attention given to improvement of policy or practice.

Economic Success Measures - Colorado

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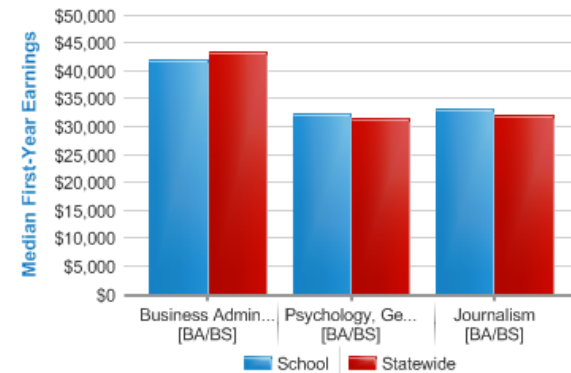
School Profile

University of Colorado Boulder

School Information

Carnegie Classification:	Research Universities (Very High Research Activity)
Address:	Regent Drive at Broadway Boulder CO, 80309-0017
Sector:	Public, 4-year or above

Three Most Popular Disclosable Programs



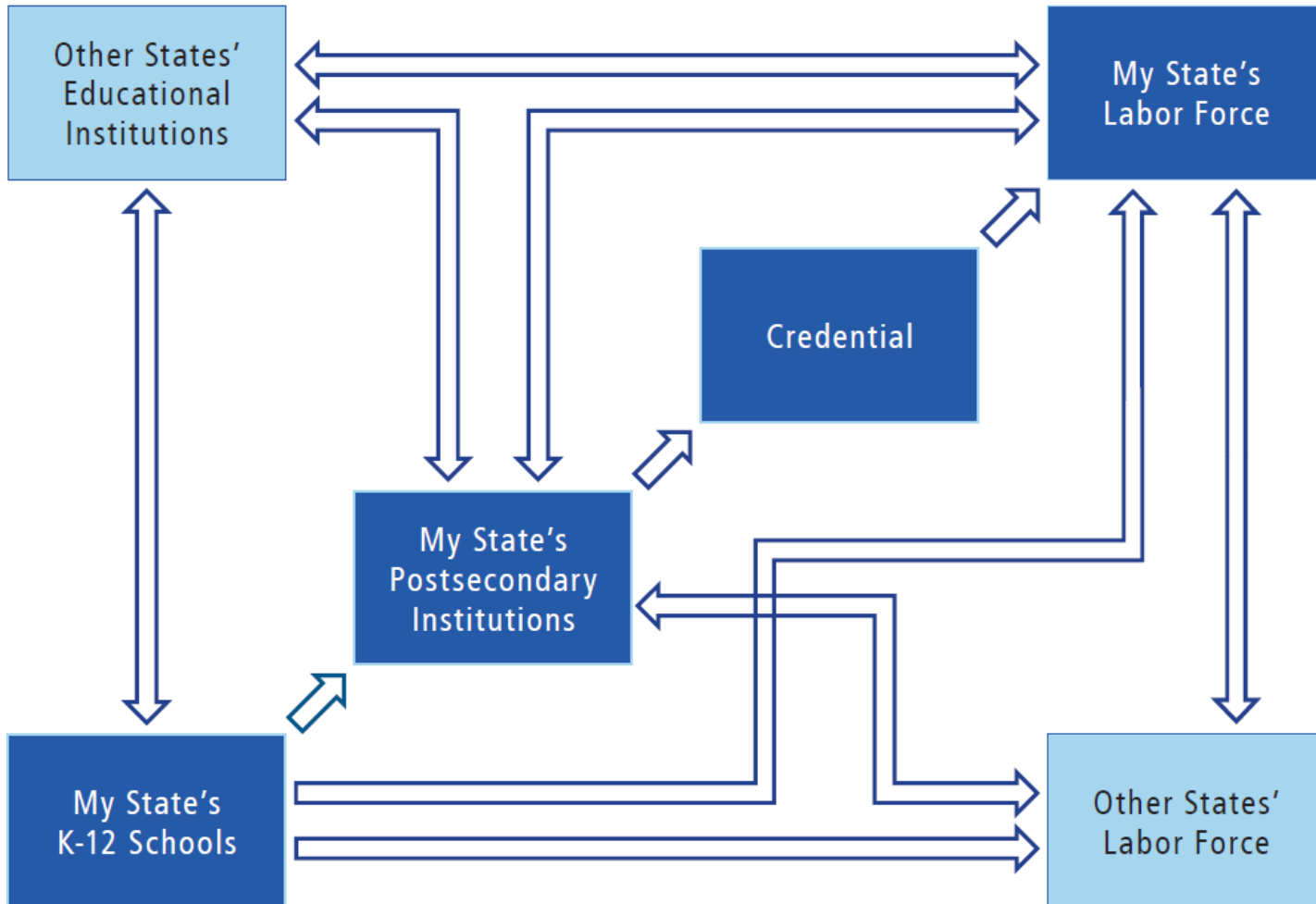
Detailed Breakdown (5 Year Data)

Degree Level	Disclosable Programs	# of Completers	# of Completers with Earnings Data	% of Completers with Earnings Data	First-Year Earnings - Median	First-Year Earnings - QTILE1	First-Year Earnings - QTILE3
⊕ Bachelor's Degree	53 disclosable programs	28,569	4,919	17 %	\$37,735	\$29,853	\$48,100
⊕ Master's Degree	48 disclosable programs	5,291	1,579	30 %	\$56,132	\$44,218	\$75,558
⊕ Doctoral Degree	43 disclosable programs	2,573	667	26 %	\$57,541	\$46,821	\$82,570

*Data have been suppressed due to there being fewer than 5 Completers with Earnings data or fewer than 15% of Completers with Earnings Data

BUILDING THE EXCHANGE: AN OVERVIEW OF THE PROCESS

WICHE's Multistate Longitudinal Data Exchange Concept



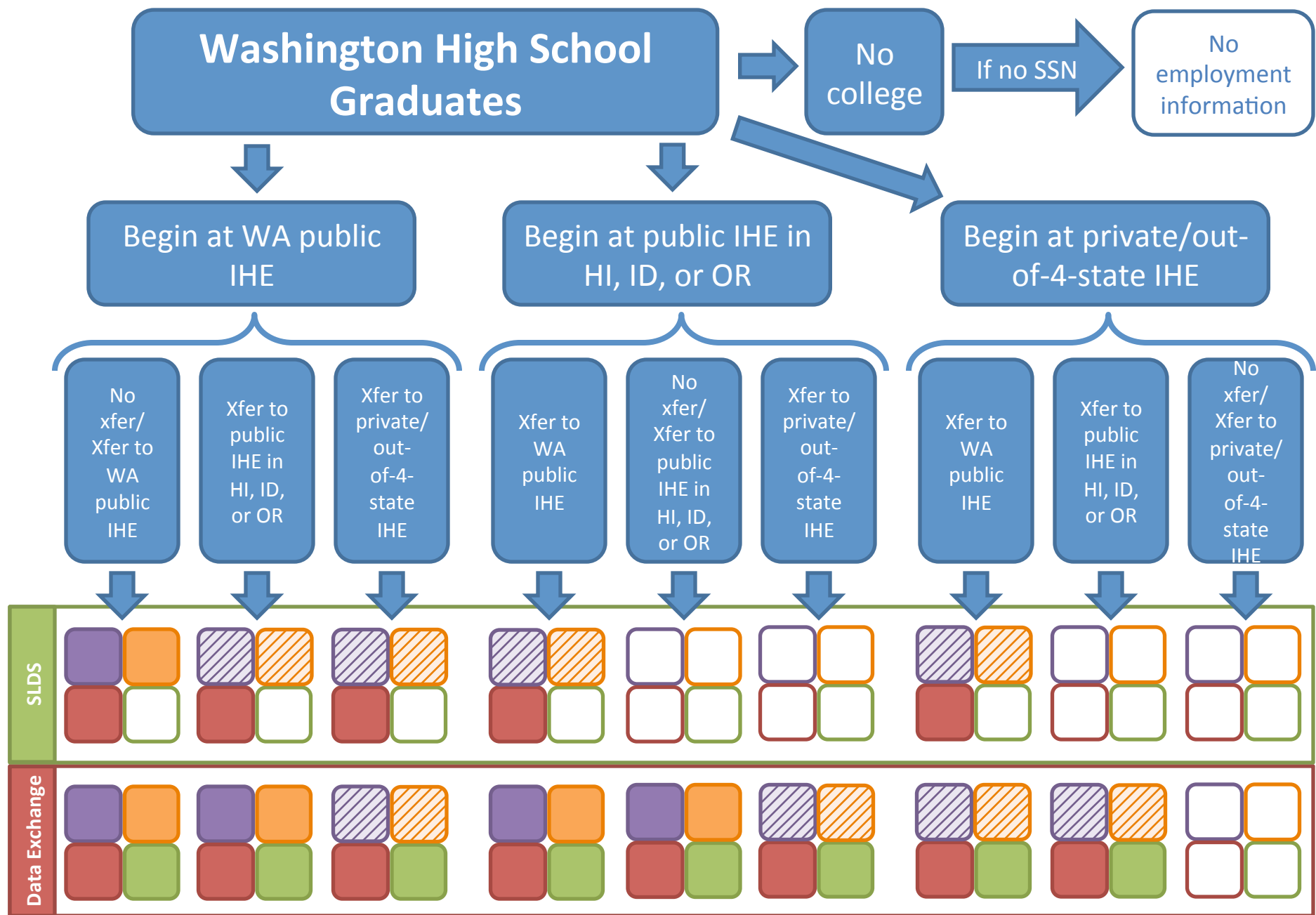
Key for the Next Slide

Enrollment
records

Credential(s)
earned

Employed in WA

Employed in HI,
ID, or OR



Key:

Enrollment records	Credential(s) earned
Employed in WA	Employed in HI, ID, or OR

Darker shading, means full data are available. Lighter shading with stripes, means partial data are available. No shading, means no data are available. SLDS representations do not include data made available through its own use of National Student Clearinghouse data or through bilateral data-sharing agreements with other states. The lack of employment data for those who don't attend college is tied to the absence of SSNs common in K-12 data systems, though some states are seeking ways to obtain one from other sources. Employment data for states not included in the data exchange are unavailable for all student pathways.

WICHE's Data Exchange Pilot

- Warehouse Model
 - States provided data on pre-defined cohorts of students to central repository (NSC).
 - An identity resolution process matched student records
 - Warehouse returned enhanced datasets to states
- Data from K-12, Higher Education, and Workforce, plus National Student Clearinghouse StudentTracker

Research Questions Embedded in MOA

1. What are the patterns of postsecondary enrollment and employment of high school graduates from each participating state?
2. What are the patterns of postsecondary enrollment and employment of students in public postsecondary institutions in participating states?

– Each with appropriate disaggregations –

3. By more fully accounting for individual mobility across state lines, to what extent does sharing data among states supplement existing state data resources available for conducting evaluations leading to policy and program improvements?

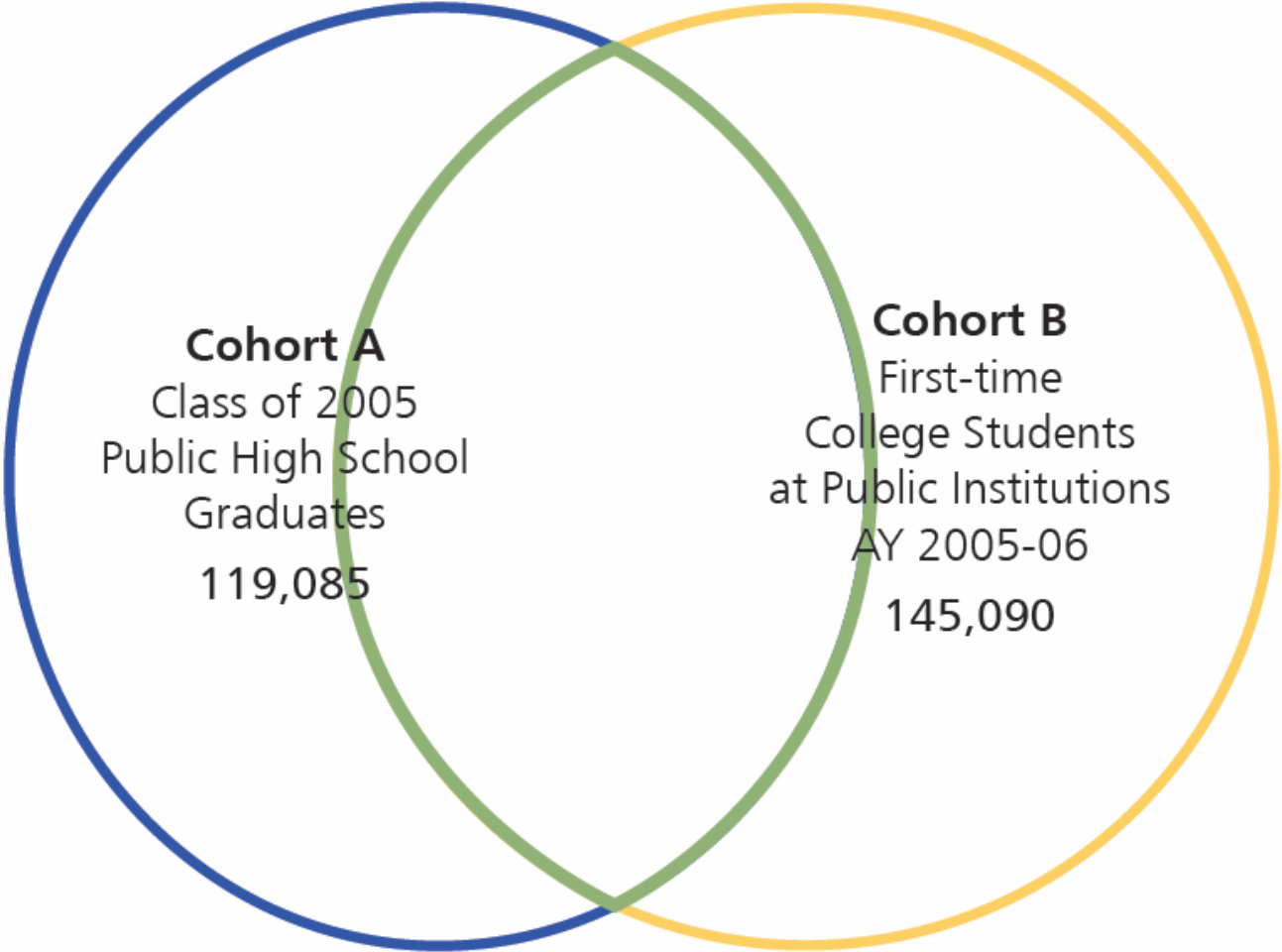
Data Sources

- Single Source States (State Longitudinal Data Systems that originally compiled the data owned by the responsible agencies in each respective state)
 - Hawaii P-20
 - Idaho Office of the State Board of Education
 - Washington Education Research and Data Center
- Multiple Sources (Oregon)
 - Oregon Department of Education
 - Oregon Department of Community Colleges and Workforce Development
 - Oregon University System
 - Oregon Employment Department

Data Elements Exchanged

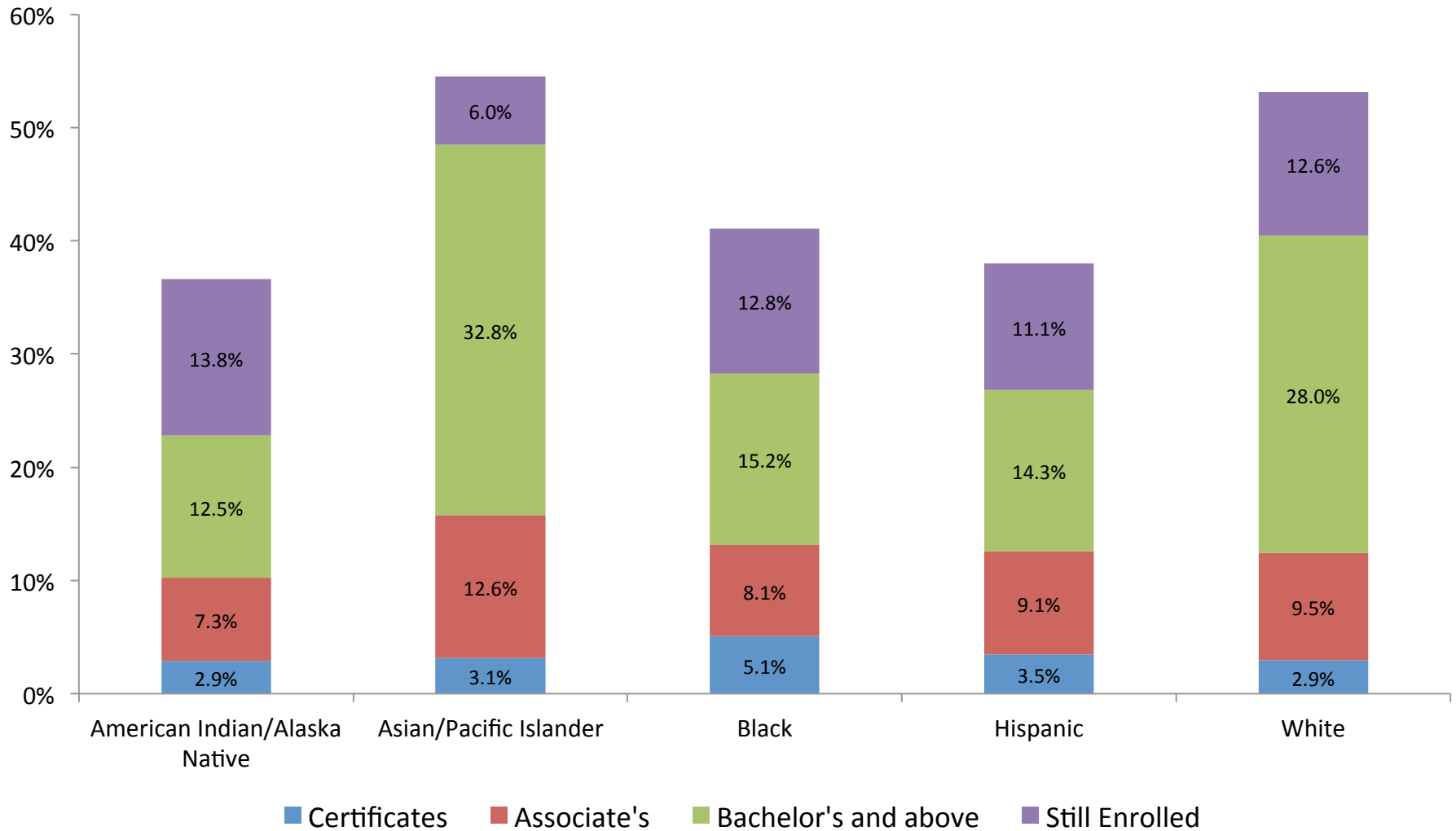
- Identity and Demographics
 - Randomly-generated Exchange ID#
- Education (Term)
 - High School Diploma
 - Postsecondary Institution
 - Credits Attempted, Passed
 - Postsecondary Awards
 - Field of Study
- Employment: Unemployment Insurance Wage Records (Quarterly)
 - Social Security Number
 - Gross Wages
 - Employer's Industry Classification

Two Cohorts



A SAMPLE OF FINDINGS

Completion by Race/Ethnicity

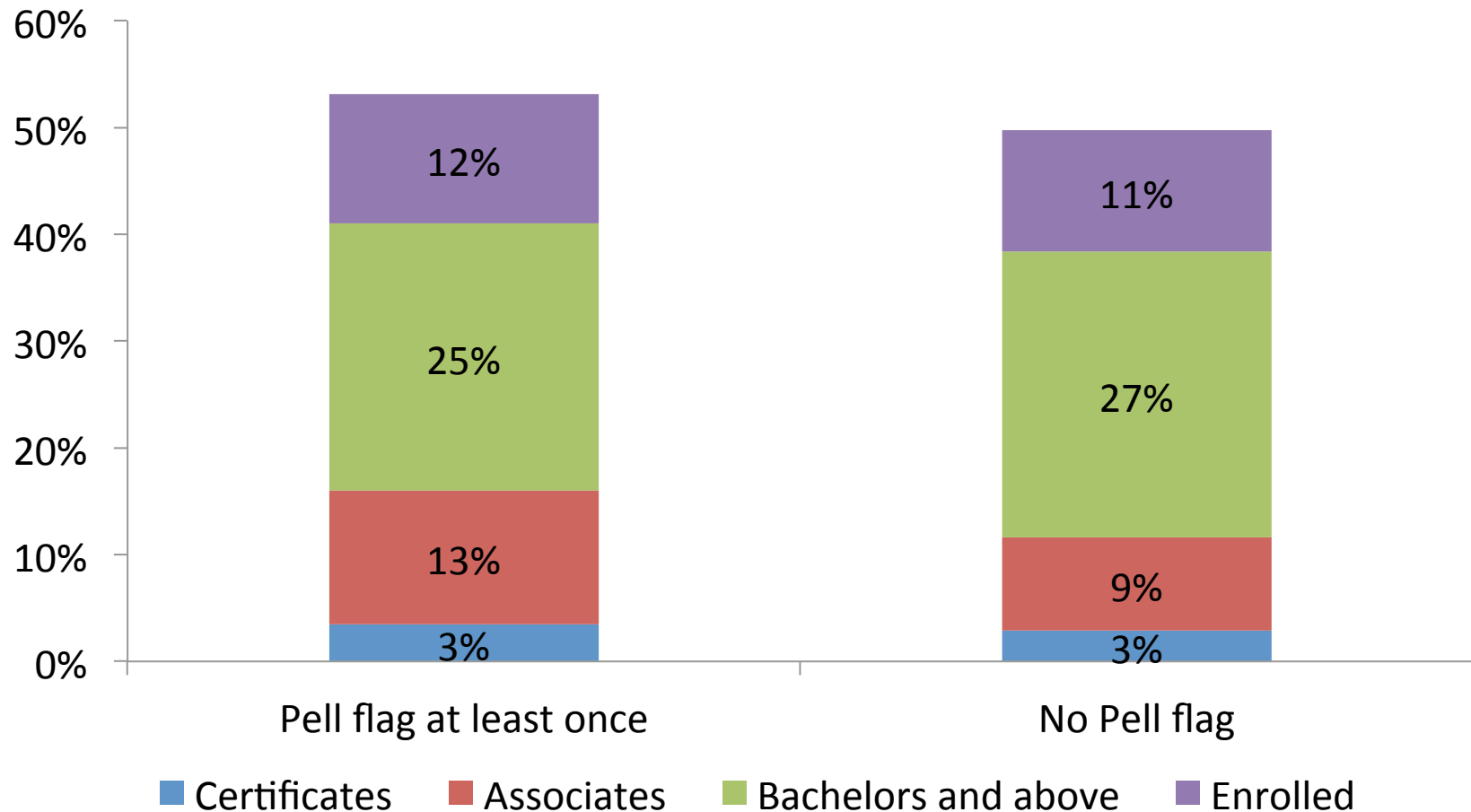


Source: WICHE Multistate Data Exchange

Notes: Data apply to public high school graduates from the class of 2005 in HI, ID, OR, or WA who had a subsequent postsecondary enrollment record, and first-time public postsecondary students in 2005-06 in any of those states. Data count awards achieved through end of AY2010-11. "Still Enrolled" means those without an award who had an enrollment in the final term AY2010-11

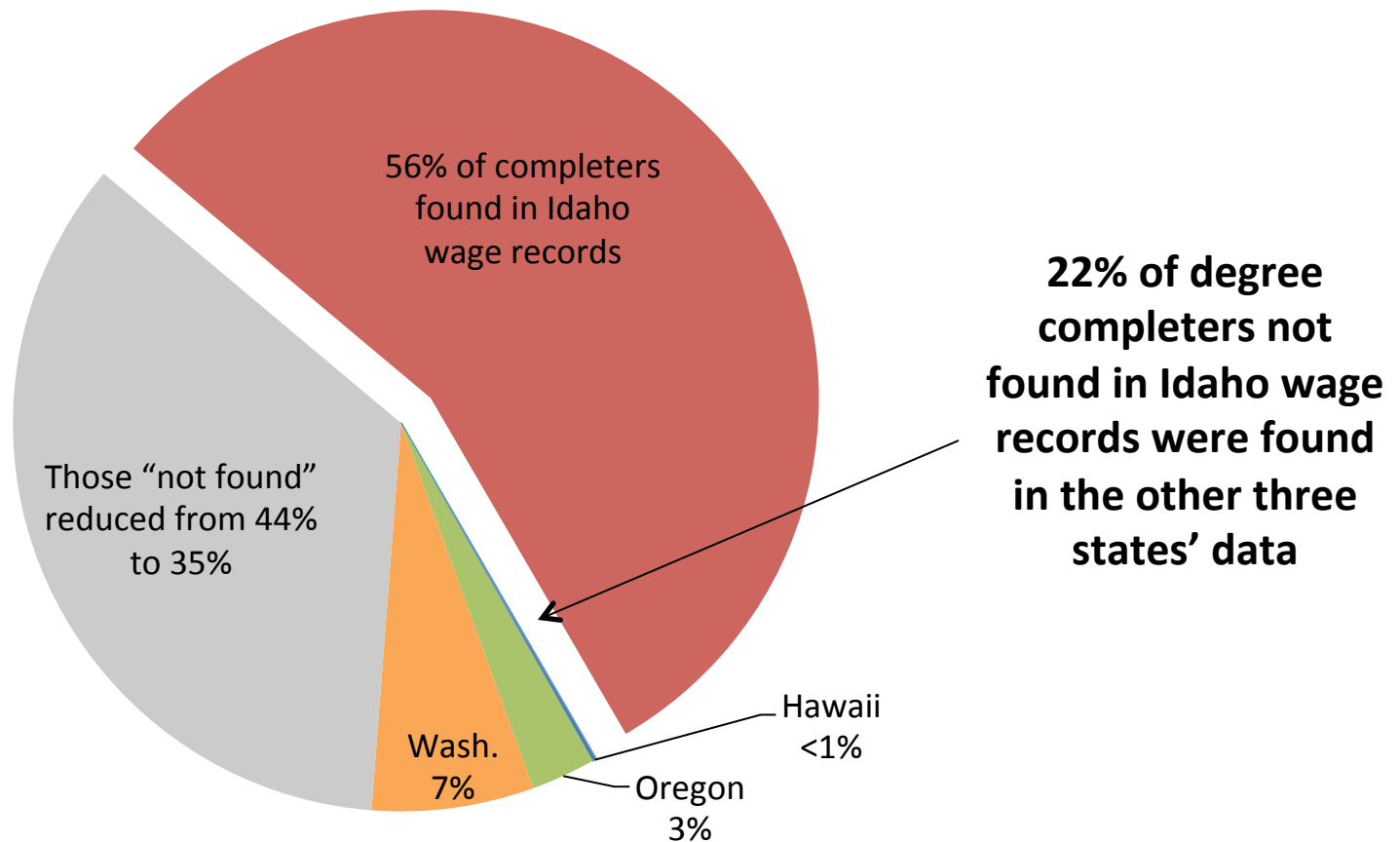


Award Attainment by “Pell Ever” Status



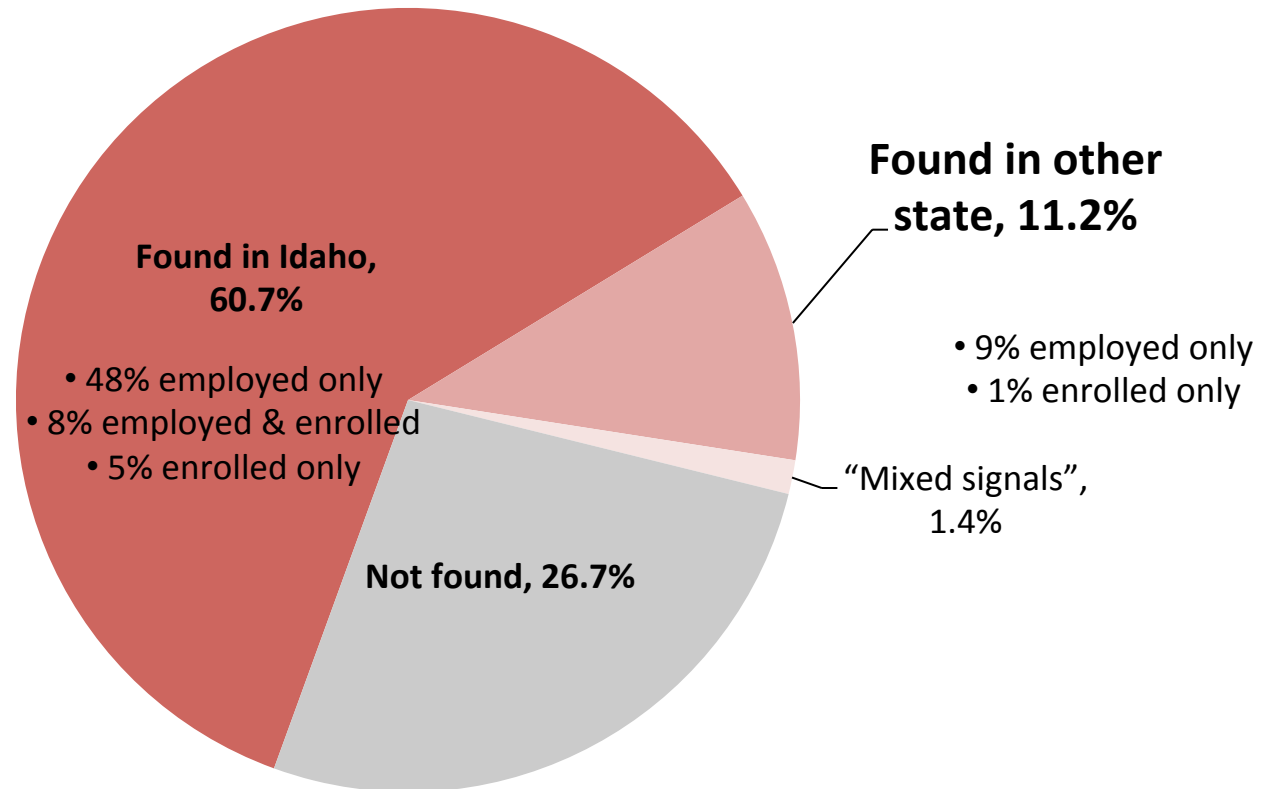
Note: Award attainment through end of AY2010-11, students from either cohort; Enrolled is those without an award who had an enrollment in the final term AY2010-11

Uncertainty About Employment Outcomes Reduced by 22% in Idaho



Notes: 3,158 students who received associate's or higher award from an institution in Idaho by Dec. 2010 and had a valid SSN

Employment and Subsequent Enrollment Data for Idaho Awardees



Notes: 3,158 students who received associate's or higher award from an institution in Idaho by Dec. 2010 and had a valid SSN

Migration Patterns

	First-Time Students ¹		Taxpayers		Commuters ²	
	In-Migrants	Out-Migrants	In-Migrants	Out-Migrants	Inbound	Outbound
Hawaii	19.8	20.7	4.8	4.7	0.8	0.8
Idaho	36.8	14.0	4.1	4.1	2.7	6.1
Oregon	34.4	10.7	3.6	3.2	5.2	2.4
Washington	19.3	11.4	3.4	3.1	2.0	3.6
Connecticut	33.2	32.6	2.5	3.0	6.4	6.4
Maine	31.7	17.6	2.6	2.7	1.8	4.7
Massachusetts	42.3	23.6	2.5	2.7	6.3	4.5
New Hampshire	50.1	28.8	3.5	3.9	10.8	17.0
New York	21.9	13.1	2.0	2.4	6.4	2.8
Rhode Island	61.3	22.5	2.9	3.6	12.8	15.6
Vermont	70.4	25.4	3.4	3.7	7.1	7.2

Notes: ¹Students are first-time students in 2012 at Title IV-eligible institutions who graduated high school within the preceding 12 months. ²Data are subject to sampling variability.

Sources: NCES IPEDS; Internal Revenue Service; McKenzie, B., *Out-of-State and Long Commutes: 2011*, U.S. Census Bureau, Table 6.

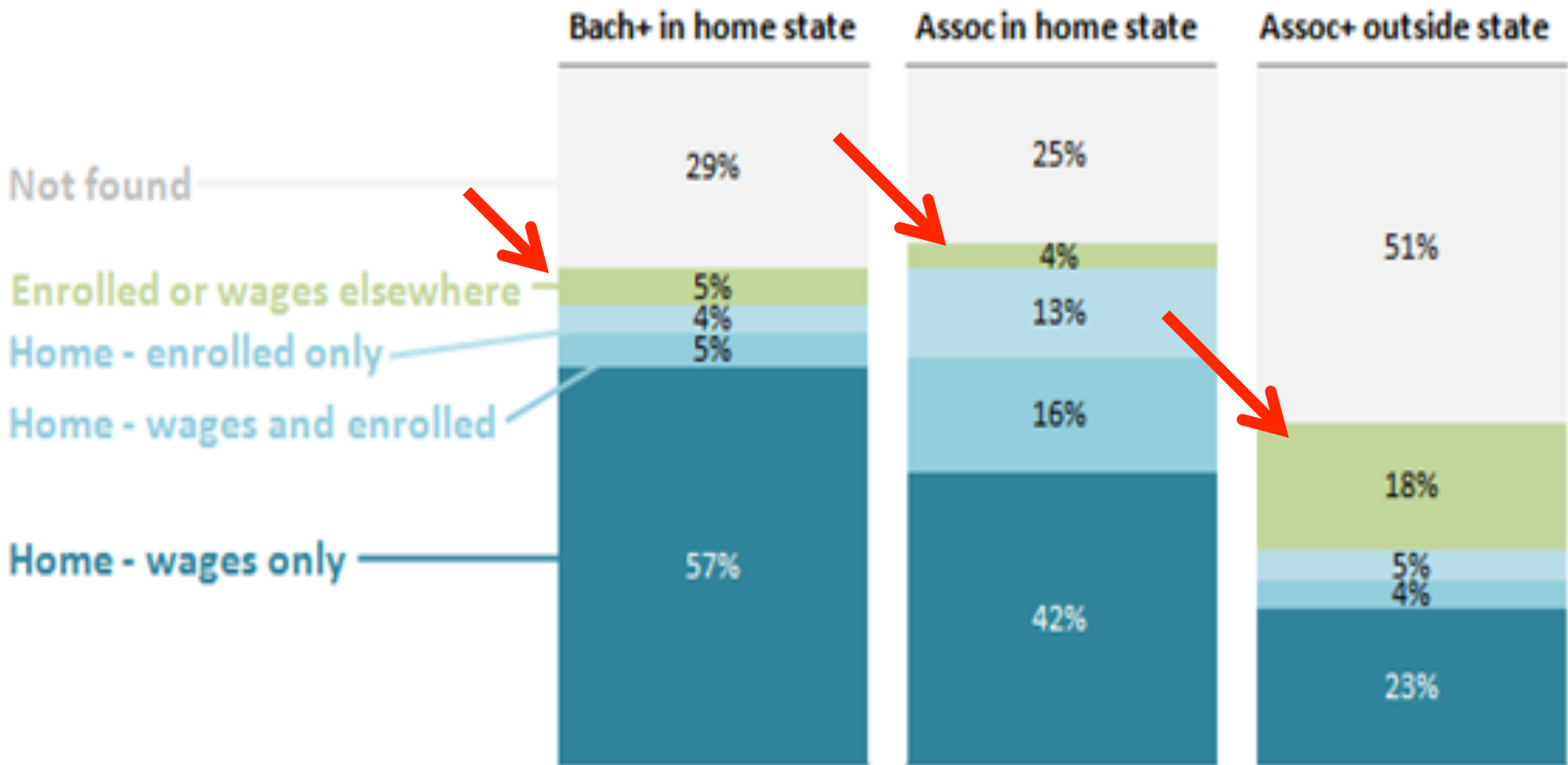


In-Migration of Recent Graduates

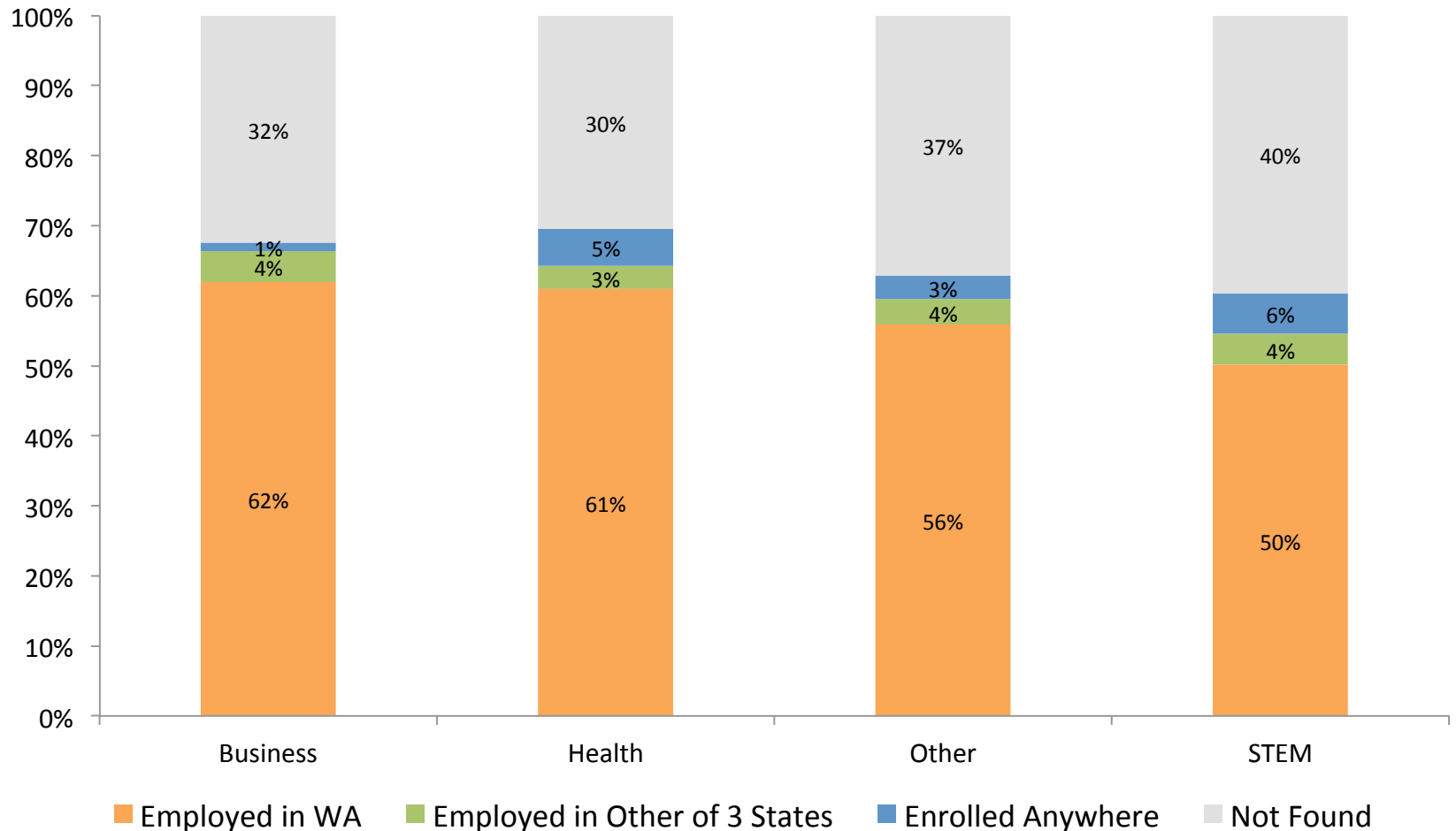
	In-Migrants (from Anywhere)	In-Migrants as % of All Completers From <i>Any State</i> With an Employment Record in Data Exchange States	In-Migrants as a % of All Completers With an Employment Record in a State Other Than Where They Obtained a Degree
Hawaii	205	14.3%	6.4%
Idaho	550	23.9%	17.3%
Oregon	1,227	15.5%	38.5%
Washington	1,198	9.2%	37.7%

Note: These data only apply to students captured in the original cohort definitions and who completed an associate's degree or higher by Dec. 2010. Employment was measured 10-12 months after receipt of award. These data should be read as, for example, Washington attracted 1,198 recent graduates from the original cohorts to its labor market, representing 9.2% of all recent graduates found to be employed in Washington and accounting for 37.7% of all the recent graduates who crossed state lines to find work.

Location Relative to “Home”

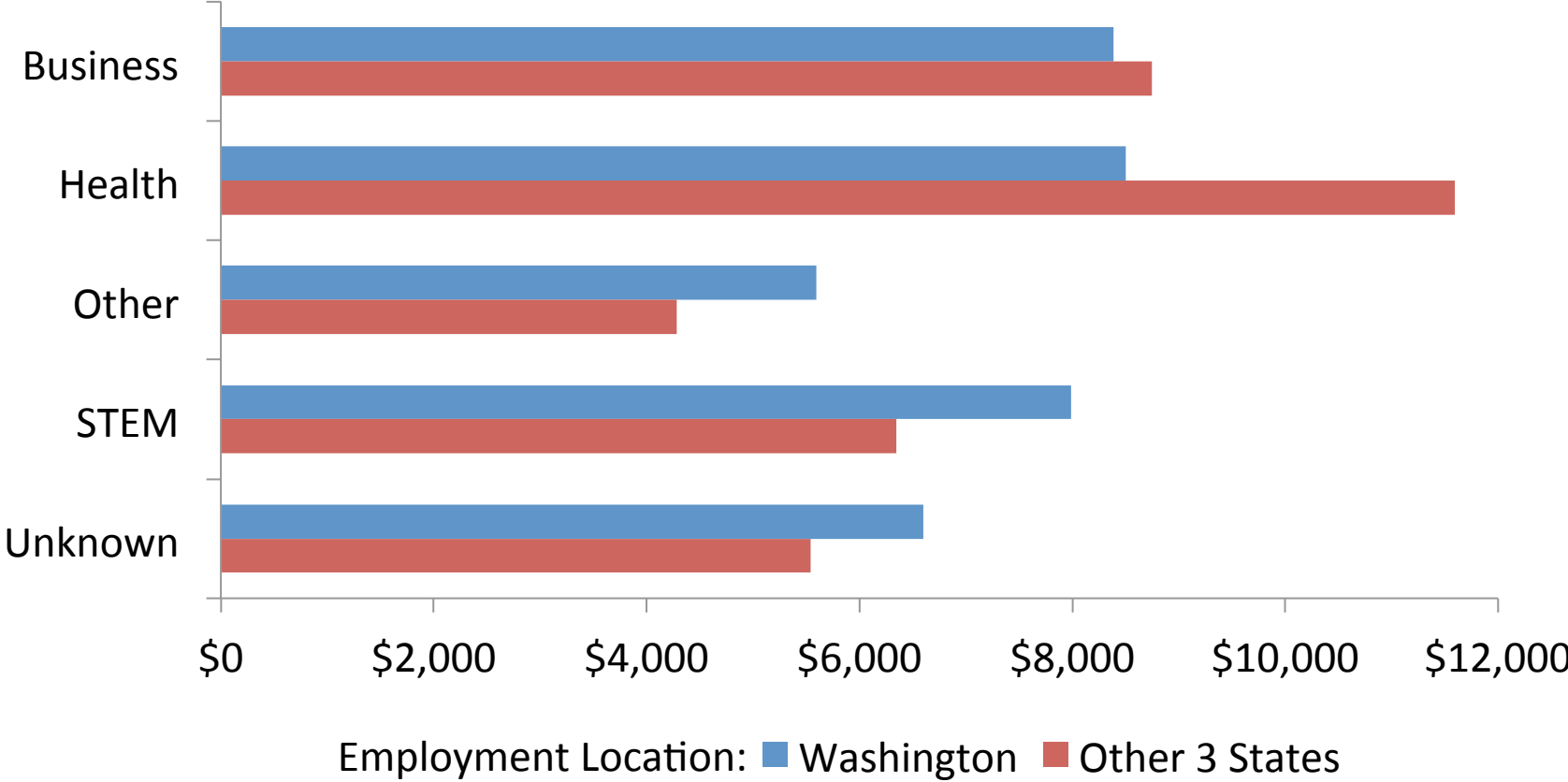


Mobility of Washington Bachelor's and Higher Graduates by Field of Study



Notes: Data are for individuals who completed by December 2010. Employment measured 10-12 months after receipt of award, and subsequent enrollment measured for a term concurrent with the quarter employment was sought.

Median Wages of Washington Bachelor's Degree Earners by CIP Field and Employment Location



Note: These data only apply to students captured in the original cohort definitions and who completed an associate's degree or higher by Dec. 2010 and who were not simultaneously enrolled. Employment was measured 10-12 months after receipt of award.



CONCLUSIONS AND NEXT STEPS

Questions for Policy and Practice

Policy

- What % of graduates (and non-graduates) are employed, both in-state and elsewhere, or pursuing further education?
- How well are state education investments meeting the needs of state industries?
- To what extent is our state retaining our own residents after their studies, or attracting them back if they left for college, as well as non-resident students we educated here?
- What is our “balance of trade” in human capital?

Practice

- Where do our former students go to find employment and in what industries?
- How well are our former students performing after they leave and attempt to enter the workforce?
- Are we offering the right mix of academic programs to serve our state’s economic development needs?
- What curricular adjustments might more fully ensure that the programs we offer are delivering the knowledge and skills the labor market demands?

More generally

Now that we have a broad picture, what more do we need to know before we act?

Advantages

- Not restricted by state borders = more comprehensive information
- Accountability & consumer info; no policy or program improvement
- Better information possible by equipping states with key information (i.e., remediation)
- Capacity to examine outcomes for those who don't graduate
- Capacity to examine the “balance of trade” among states in talent

Limitations

- Coverage of students attending independent institutions
- Relies on voluntary adoption
- Employment outcomes for students who do not go to college
- Self-employed, military, and federal government not covered in UI wage records
- Variables of interest missing from UI wage records

Lessons

- Analyses of mobility have policy relevance, without having to wade into interpretations of wages
- Indicators of outcomes vary based on staying or leaving
- Greater flexibility and capacity to deliver rapid responses to policy questions needed
- Need to expand to more states, not just for better coverage but also for ease of interpretation
- More capacity to do analysis needed at state level
- Ongoing debates about CCSS assessments and data security are bound up together and a threat
- Value propositions are unequal among states and state agencies

Where To From Here?

- New round of funding to expand exchange to at least 10 total states
- Changing exchange architecture to enhance usability and security
- Long-term vision: A sustainable resource available (though not necessarily free) to all states

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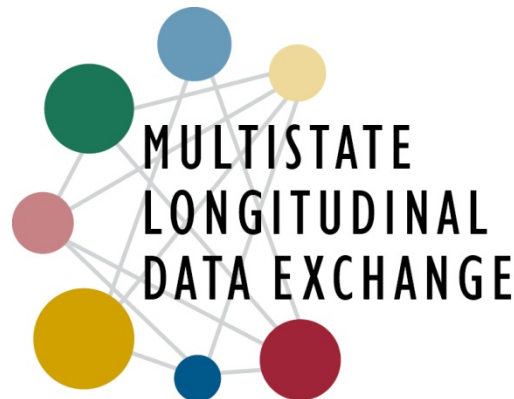
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Identity Resolution

