

# DEMOGRAPHIC APPLICATIONS OF THE WASHINGTON STATE P-20W: COHORT LINKAGES

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GOVERNOR JAY INSLEE

# The Agenda Today

- ▶ **Who are we? And what do we do?**
  - The Education Research and Data Center (ERDC)
  - My role in ERDC
  
- ▶ **P20-W Administrative Data**
  
- ▶ **P20-W Cohorts**
  
- ▶ **P20-W Examples – HS Feedback, CTC Mock Tables, DSHS**
  
- ▶ **Lessons learned and future research using a state longitudinal data system**

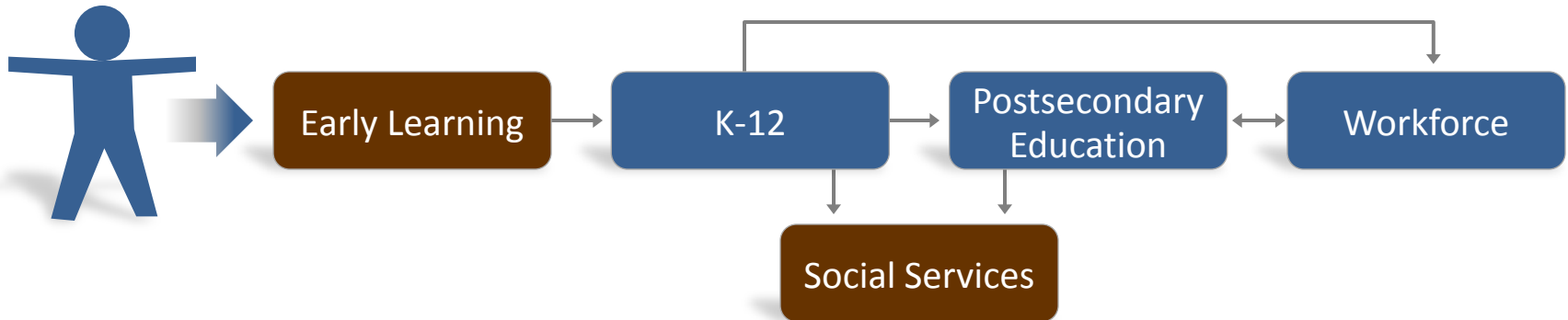


# About the ERDC

- ▶ RCW 43.41.400 established the Education Research & Data Center (ERDC) in the Washington State Office of Financial Management (OFM) in 2007.
- ▶ ERDC Mission—

*To develop longitudinal information spanning the P-20W system in order to: facilitate analyses, provide meaningful reports, collaborate on education research, and share data.*

*ERDC collaborates with other state agencies to produce cross-sector, longitudinal reports and analyses including early learning, K12, higher education and workforce. The ARRA grant that ends in June, 2014 accelerates this work.*



# ABOUT THE P20W DATA WAREHOUSE

The ERDC is the owner and user of the State of Washington's P20W Data Warehouse. The system is hosted by the Department of Enterprise Services.

- The P20W Data Warehouse is a statewide longitudinal data system that includes de-identified data about: people's early childhood, Kindergarten through 12<sup>th</sup> grade, higher education and workforce experiences and performances (hence the name P20W).
- The data are collected and linked from existing state agency data systems.
- It includes data about the kinds of services they receive, programs in which they participate, and their academic performance and program or degree completion.
- It also includes a variety of demographic data so we are able to look at a various sub-groups.
- Personally identifiable information, such as names, social security numbers, addresses, and other data which can identify a person as an individual, are not part of the research database.



# ABOUT THE P20W DATA WAREHOUSE

## ▶ **Centralized, research-oriented**

- Comprehensive data from early learning, K-12, public postsecondary, workforce

## ▶ **Also—**

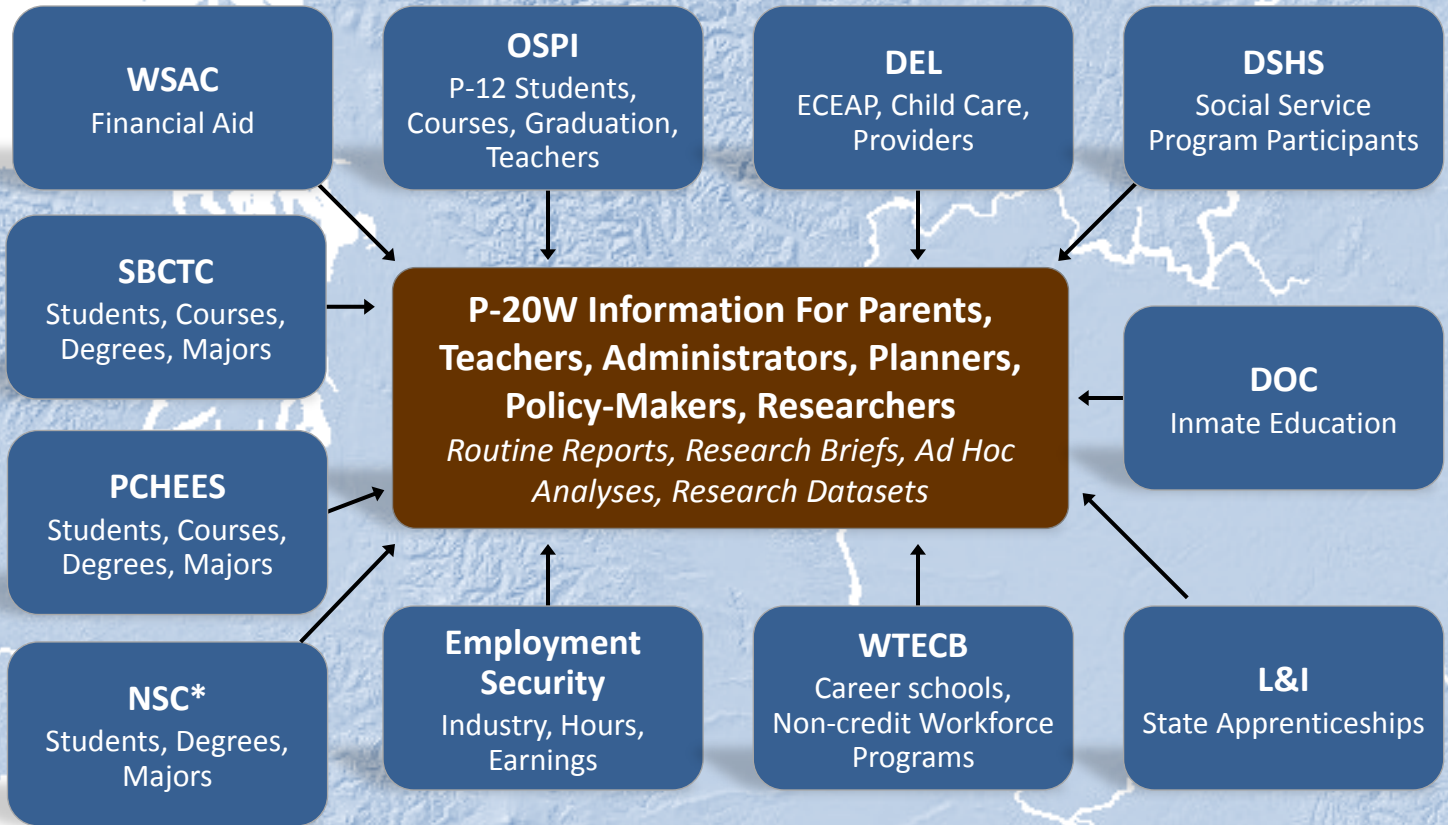
- Apprenticeship, corrections, GED completers, National Student Clearinghouse and selected non-education sources (DOL and WA Courts)

## ▶ **Key functionality—**

- Identity matching and linking, cohort management, and protecting and securing PII (Family Education Rights and Privacy Act - FERPA)



# Washington P20W Data



**DEL:** Dept of Early Learning  
**DOC:** Dept of Corrections  
**DSHS:** Dept of Social and Health Services  
**WSAC –** Washington Student Achievement Council  
**L&I:** Labor and Industries  
**NSC:** National Student Clearinghouse – \*Not Washington state data  
**OSPI:** Office of Superintendent of Public Instruction  
**PCHEES:** Public Centralized Higher Education Enrollment System  
**SBCTC:** State Board for Community and Technical Colleges  
**WTECB:** Workforce Training and Education Coordinating Board



# Cohort

A cohort is a grouping of people for research or analytical purposes. There are three types of cohorts, based upon how the participants of the cohort are identified and managed. Cohorts start with either a predetermined list of participants or a predetermined list of characteristics that can be used to generate the list of participants.

## Fixed Cohort

The Fixed Cohort consists of a list of participants (people) that do not change.

This list can be provided to ERDC or it can be created by ERDC based on specific characteristics. This list is not changed by the ongoing identity matching processes. Once a member, always a member.

## Updatable Cohort

The Updated Cohort uses “Begin” and “End” dates to limit the participation within the cohort to a specific time period. Having no “End” date indicates continued and uninterrupted participation in the Cohort. Membership in the cohort can change due to the results of ongoing identity matching processes. The dates allow the replication of the cohort for different time periods.

## Dynamic Cohort

The Dynamic Cohort is defined by Characteristics (e.g. 9<sup>th</sup> Grade Students) and all of the participants are replaced each time the cohort is to be used (e.g. Weekly, Monthly, Yearly, Ad-hoc). Membership in the cohort is updated to be in sync with the most recent identity matching processes.



# Data sources

- ▶ **High School Graduates:** The 2004-05 to 2011-12 annual summary data file (**P-210**) for public high school enrollment and completion from the Office of Superintendent of Public Instruction; the **CEDARS** - Comprehensive Education Data and Research System and **CSRS** - Core Student Record System were also employed to augment the P210 data; and
- ▶ **Washington Community and Technical College Enrollment:** the 2005-06 to 2012-13 Enrollment Data from the State Board for Community and Technical Colleges (SBCTC), which includes student enrollment by term for the 35 colleges in the state system; and
- ▶ **Washington Public University Enrollment:** the 2005-06 to 2012-13 Enrollment Data from the Public Centralized Higher Education Enrollment System; and
- ▶ **Private and out-of-state College/University Enrollment:** the 2005-06 to 2012-13 Enrollment Data from the National Student Clearinghouse.





# P20 HIGH SCHOOL FEEDBACK REPORTS

## UPDATABLE COHORTS AND REDACTED DATA

What percentage of high school graduates enrolled in postsecondary education?

Table 1. Student enrollment by type of institution Enrolled in Postsecondary Ed				
Percent of Enrollments	2009	2010	2011	2012
Washington	84%	83%	83%	83%
Public 4-year	29%	28%	29%	31%
Private 4-year	5%	5%	5%	5%
Public 2-year	50%	50%	48%	47%
Private 2-year	0-1%	0-1%	0-1%	0-1%
Out of State	16%	17%	17%	17%
Public 4-year	6%	6%	6%	7%
Private 4-year	8%	8%	8%	8%
Public 2-year	2%	2%	3%	2%
Private 2-year	0-1%	0-1%	0-1%	0-1%
Total High School Graduates	62,866	65,706	66,350	66,241
% Going to College	63%	62%	60%	60%



# P20 HIGH SCHOOL FEEDBACK REPORTS

## UPDATABLE COHORTS AND REDACTED DATA

For graduates who enrolled in postsecondary education, what are the characteristics of their participation?

Table 4. Postsecondary participation characteristics for students enrolled in Washington public institutions

	2009		2010		2011		2012	
	2-yr enroll	4-yr enroll	2-yr enroll	4-yr enroll	2-yr enroll	4-yr enroll	2-yr enroll	4-yr enroll
<i>Percent Enrolled</i>								
Enrollment in Pre-college coursework in Math	51%	11%	51%	11%	50%	10%	50%	7%
Enrollment in Pre-college coursework in English	27%	4%	26%	3%	26%	2%	26%	2%
Enrollment in Pre-college coursework in English <u>and</u> math	19%	2%	20%	2%	19%	0-1%	18%	0-1%
Enrollment in <u>any</u> pre-college coursework	59%	13%	58%	12%	57%	11%	57%	8%
Continuously enrolled	60%	74%	58%	76%	57%	69%	58%	69%
Enrolled in less than 12 credits	11%	0-1%	12%	0-1%	12%	0-1%	12%	0-1%
Enrolled in 12 or more credits	89%	99-100%	88%	99-100%	88%	99-100%	88%	99-100%



# CTC REPORTS – MOCK TABLES

## UPDATABLE COHORTS

**Table 1: 2011-12 First-time Enrolled CTC Students and Prior WA Public K12 Enrollment.**

WA Public Involvement		Counts	Percent
<b>WA K12 Public HS Grads</b>	Graduated from HS in 2012 (within current year of HS Graduation)	920	3.9%
	Graduated from HS in 2011 (within 1 year of HS Graduation)	14,297	61.1%
	Graduated from HS in 2010 (within 2 years of HS Graduation)	3,530	15.1%
	Graduated from HS in 2009 (within 3+ years of HS Graduation)	4,659	19.9%
	<b>Total HS Grads</b>	<b>23,406</b>	<b>28.6%</b>
<b>Attended WA K12 Public but Did Not Graduate</b>	Last Enrolled in HS in 2012	3,149	35.7%
	Last Enrolled in HS in 2011	1,538	17.4%
	Last Enrolled in HS in 2010	898	10.2%
	Last Enrolled in HS in 2009 or earlier	3,233	36.7%
	<b>Total enrolled, Did Not graduate</b>	<b>8,818</b>	<b>10.8%</b>
<b>No WA Public K12 enrollment or graduation</b>		<b>49,713</b>	<b>60.7%</b>
<b>Total</b>		<b>81,937</b>	<b>100.0%</b>



# CTC REPORTS – MOCK TABLES (CONTINUED)

## UPDATABLE COHORTS

**Table 3. Description of 2011-12 First-Time Enrolled CTC Students by WA Public K12 Participation**

CTC Student Characteristics	Graduated From WA K12 Public HS		Attended WA K12 Public HS - Did NOT Graduate		No WA Public K12 Participation	
<b>Age</b>						
Under 20	16,326	69.8%	5,238	59.4%	6,166	12.4%
20 to 24	6,687	28.6%	3,204	36.3%	8,061	16.2%
25 to 29	391	1.7%	373	4.2%	9,080	18.3%
30 to 39	0	0.0%	1	0.0%	12,102	24.3%
40 and over	2	0.0%	2	0.0%	12,843	25.8%
Unknown	0	0.0%	0	0.0%	1,461	2.9%
Average Age	19.4		19.3		32.7	
<b>Gender</b>						
Female	11,772	50.3%	3,929	44.6%	24,717	49.7%
Male	11,431	48.8%	4,604	52.2%	23,346	47.0%
Unknown	203	0.9%	285	3.2%	1,650	3.3%
<b>Race/Ethnicity</b>						
AIAN	252	0.7%	166	1.9%	722	1.5%
Asian	1,511	6.5%	469	5.3%	6,013	12.1%
Black	988	4.2%	572	6.5%	3,137	6.3%
Hispanic	3,376	14.4%	1,046	11.9%	3,961	8.0%
White	14,021	59.9%	4,892	55.5%	26,346	53.0%
NH/PI	77	0.3%	17	0.2%	189	0.4%
Two or More	1,553	6.6%	565	6.4%	1,879	3.8%
Other	289	1.2%	155	1.8%	694	1.4%
Unknown	1,274	5.4%	886	10.0%	6,583	13.2%



# CTC REPORTS – MOCK TABLES (CONTINUED)

## UPDATABLE COHORTS

**Table 4. CTC Enrollment Characteristics for 2011-12 First-Time Enrolled Students**

CTC Student Characteristics	Graduated From WA K12 Public HS		Attended WA K12 Public HS - Did NOT Graduate		NO WA Public K12 Participation	
<b>Intent/Purpose of Enrollment</b>						
Academic Non-Transfer Degree	838	3.6%	180	2.0%	1,356	2.7%
Academic Transfer	13,288	56.8%	3,259	37.0%	15,794	31.8%
HS Diploma/GED	106	0.5%	1,396	15.8%	1,386	2.8%
Vocational Preparatory	5,833	24.9%	2,818	32.0%	20,817	41.9%
Applied Baccalaureate	9	0.0%	2	0.0%	46	0.1%
Upgrade Job Skills	956	4.1%	355	4.0%	5,442	10.9%
General Studies	760	3.2%	142	1.6%	1,807	3.6%
Multiple Goal Seeker	283	1.2%	58	0.7%	589	1.2%
Undecided/None of the Above	1,333	5.7%	608	6.9%	2,476	5.0%
<b>Full-Time or Part-Time (36 Hours)</b>						
Full Time	7,871	33.6%	1,159	13.1%	10,624	21.4%
Part Time	15,535	66.4%	7,659	86.9%	39,089	78.6%
<b>Number of Credits Earned in a Year</b>						
Under 15	8,277	35.4%	5,240	59.4%	24,942	50.2%
15 to 29	4,812	20.6%	1,888	21.4%	10,359	20.8%
30 or more	10,317	44.1%	1,690	19.2%	14,412	29.0%
Average Credit Hours	26.5		18.1		21.6	



# DSHS PROJECT WITH 2005-06 9<sup>TH</sup> GRADERS - DYNAMIC COHORTS

AVAILABLE AT: [HTTP://PUBLICATIONS.RDA.DSHS.WA.GOV/1471/](http://publications.rda.dshs.wa.gov/1471/)

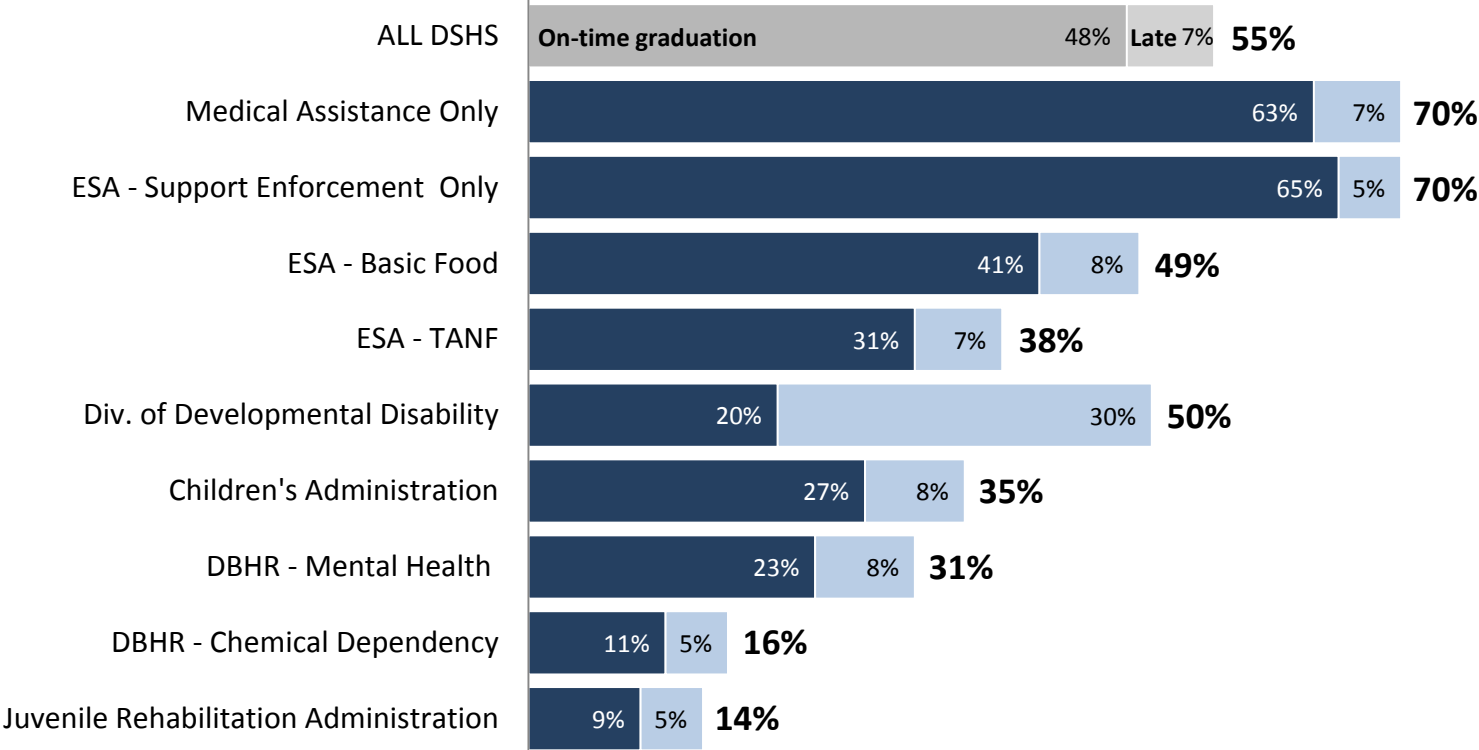
## Graduation and Drop-out Rates for Students Who Were 9th Graders in 2005-06

- Experiences and risk factors that lead to the need for DSHS services also adversely impact educational outcomes for children and youth
- 55 percent of 9th graders served by DSHS in 2005/06 had graduated 6 years later, while only 48 percent graduated on-time with their class
- 9th graders in Juvenile Rehabilitation Administration or substance abuse treatment programs had extremely low graduation rates, with less than 20 percent of youth graduating
- 9th graders who received TANF cash assistance or services to address child abuse or mental health needs were about half as likely to graduate as children who received medical assistance or child support enforcement services alone
- DSHS clients at risk for high school drop-out can be identified as early as the 9th grade based on their grade point average or level of unexcused absences



# High school outcomes vary greatly by DSHS service category

*One-time and extended (late) graduation for students who received at least one month of DSHS services while in the 9th grade (Academic Year 2005-2006)*



# Summary, Lessons Learned and Future Research

- Linking records cross-sector is perplexing, but hopefully P-20 DW will solve many of the issues (P20 Token IDs).
- Censoring and Missing Information remain a problem. Difficulty with dates and the timing/recording of data.
- Creating Cohorts is a challenge; mentally and physically.
- Which characteristics are best for selection? Last Enrollment? Any/Ever in K12 or HS? How is time involved/Timing of Events?
- Population Estimates – symptomatic or direct indicators.
- Public Use Microdata Samples (PUMS) type files may be possible through National Opinion Research Center (NORC).
- Links to American Community Survey (ACS) as context; possible ACS Weights; Secure Census Site Linkages to Federal data.





# ERDC/P-20W Research and Reporting Deliverables

## ▶ Feedback Reports

- P20 for K12 reports – <http://erdcdata.wa.gov>
- P20 for CTC and Baccalaureate institutions *in development*

## ▶ Research Briefs—

- Postsecondary enrollment patterns ,Teacher transitions  
<http://www.ercd.wa.gov/briefs/>

## ▶ Recently-Asked Questions

- <http://www.ercd.wa.gov/faq/default.asp#text5>

## ▶ Data Sets - Gear Up and New Futures Evaluation studies

- [http://www.ercd.wa.gov/arraslds2009/reports/other/new\\_futures\\_eval\\_brief.pdf](http://www.ercd.wa.gov/arraslds2009/reports/other/new_futures_eval_brief.pdf)
- <http://www.gearup.wa.gov/files/Making%20the%20Dream%20a%20Reality%202012.pdf>



# Washington State P-20W Data Request Process

Please go to the ERDC's "Accessing P-20W Data" page at: <http://www.ercd.wa.gov/data/>

1. Fill out the Data Request Form send to ERDC
2. ERDC calls requestor to clarify request if necessary
3. If request is changed, ERDC will send changes to requestor for approval
4. ERDC sends the data request that includes study questions and data requested to data contributors
5. Data contributors have 5 days to review and respond to requestor about the data requested
6. Requestor works with ERDC to revise request based on feedback, if necessary
7. ERDC creates a data sharing agreement with requestor to share the linked, de-identified data a copy of signed DSA will be made available by ERDC via the website or email
8. ERDC works to get the data to requestor
9. Requestor works with the data and contacts data contributors with questions about their data
10. Requestor sends draft report to ERDC for distribution to data contributors
11. Data contributors have 10 days to review report and respond to requestor with comments about use of data
12. Requestor releases report



# Contact

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