

# HOW STATES ARE BUILDING DATA ANALYTICS CAPACITY

2021 National TANF Directors' Meeting  
September 20, 2021



# SESSION AGENDA

1. TDC project overview – Melissa Wavelet
2. California project – Caroline Moyers
3. New York project – Britany Orlebeke
4. Utah project – Nycole Tylka



# TANF Data Collaborative supports TANF agencies' efforts to:



# The TDC Team

# Sponsored by



# What we heard from TANF Agencies....

*Unpacking Data Use in State TANF Agencies  
Insights from the  
TANF Data Innovation Needs Assessment*

# TDC Needs Assessment Survey: Primary Barriers to Data and Analysis

Staff  
Time

Availability of  
Technology  
and Tools

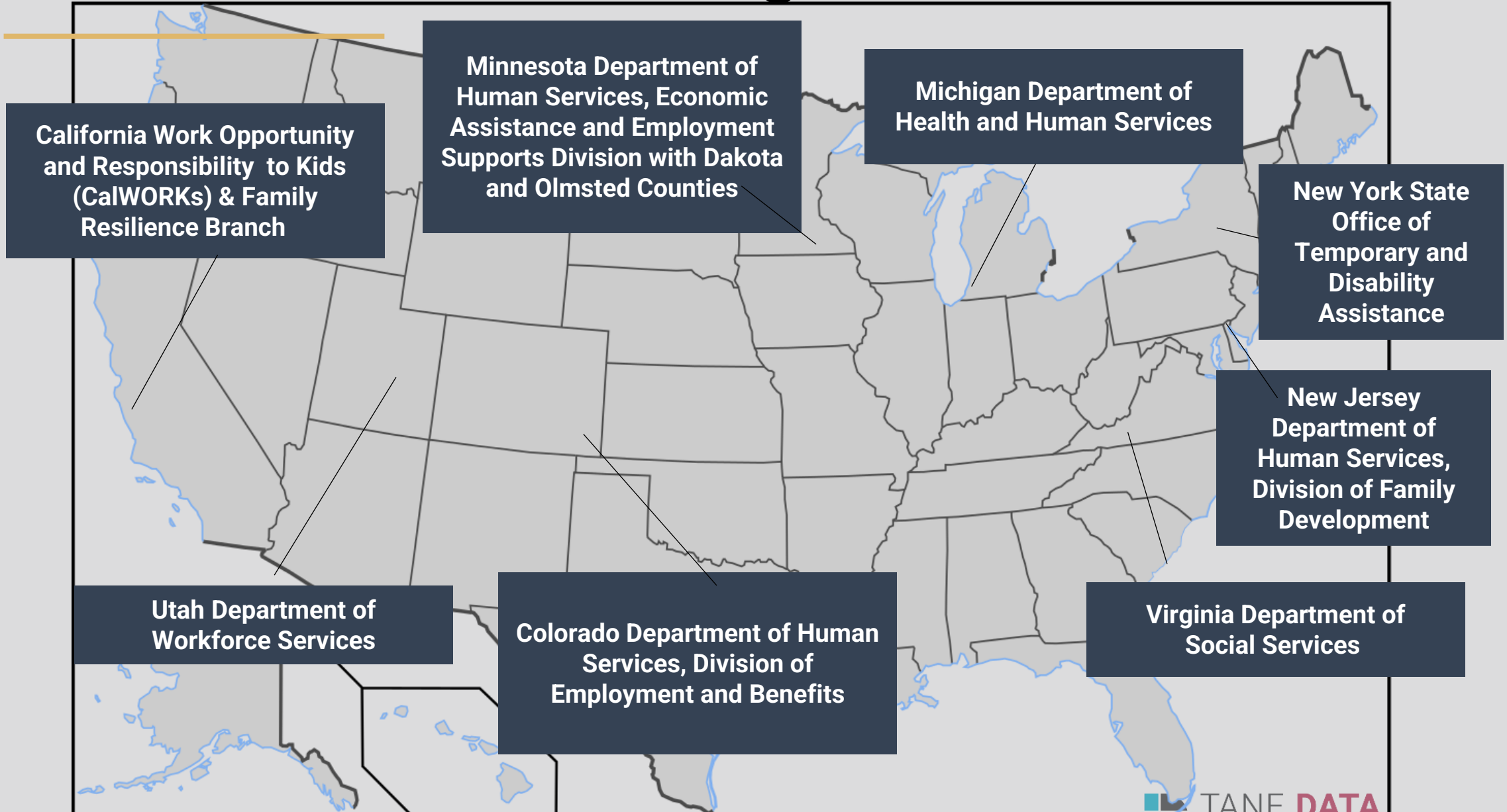
Staff  
Skills

Availability of  
Financial  
Resources



Source: TANF Data Use and Opportunities survey module (generally completed by TANF agency director; reporting results from 43 states)

# TDC Pilot Agencies





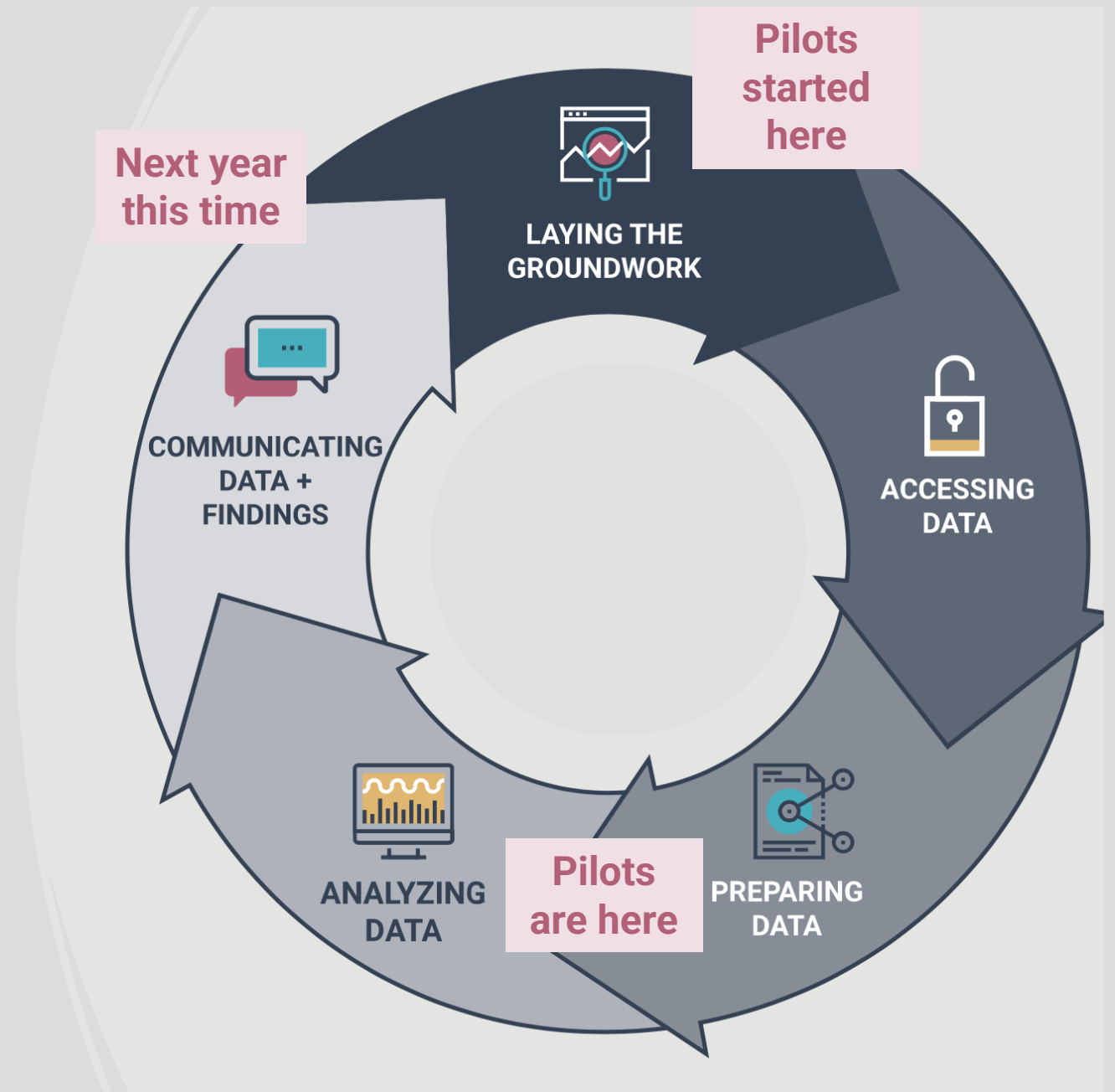
# WHAT A YEAR IT HAS BEEN!

(KICKOFF CONVENING  
MARCH 8, 2020)





# THE TDC FRAMEWORK



# TDC PILOT ACTIVITIES

1:1 COACHING SESSIONS

PILOT HANGOUTS

2020 IN PERSON CONVENING

APPLIED DATA ANALYTICS TRAINING PROGRAM

“R” OFFICE HOURS

MONTHLY WEBINARS

2021 VIRTUAL CONVENING

# TDC Data Inclusion Goals

## Expanding to Participant Perspectives

### Bridge

Bridge the gap between data staff and program staff.

### Empower

Empower program staff to ask questions about data practices.

### Encourage

Encourage data staff to include insights from program work in data methods and strategies.

### Learn

Create opportunities for peer-to-peer learning exchanges between staff with different roles.

# TDC Pilot Initiative Goal



Promote sustained data use and support a culture of data informed decision - making

# COMPONENTS OF SUSTAINABILITY



# WHAT IS NEXT FOR PILOTS?



Pilot work remains center stage



Coaches provide ongoing support and access to resources



More monthly webinars



April 2022 Capstone Convening



# WHAT IS NEXT FOR YOU?

**Visit**  
**[www.tanfdata.org](http://www.tanfdata.org)**  
**for resources & pilot news**



Questions?

# The Role of Place in Wage Progression of TANF Leavers

Lessons from the California Department of Social Services'  
Participation in the TANF Data Collaborative

Caroline Moyer, MSW

Research Data Analyst II, California Department of Social Services



# Agenda

1. New general data and research insights
2. New ways to look at wage progression
3. New ways to test theories with statistical modeling

# New Data and Research Insights

1. Coding



2. Codifying research questions and variables

3. Documentation



# New Ways to Look at Wage Progression

- The aggregate method
  - Current method used for California's TANF continuous quality improvement initiative



EXIT COHORT



Median wage 2 qtrs post-exit  
*of those with wages*

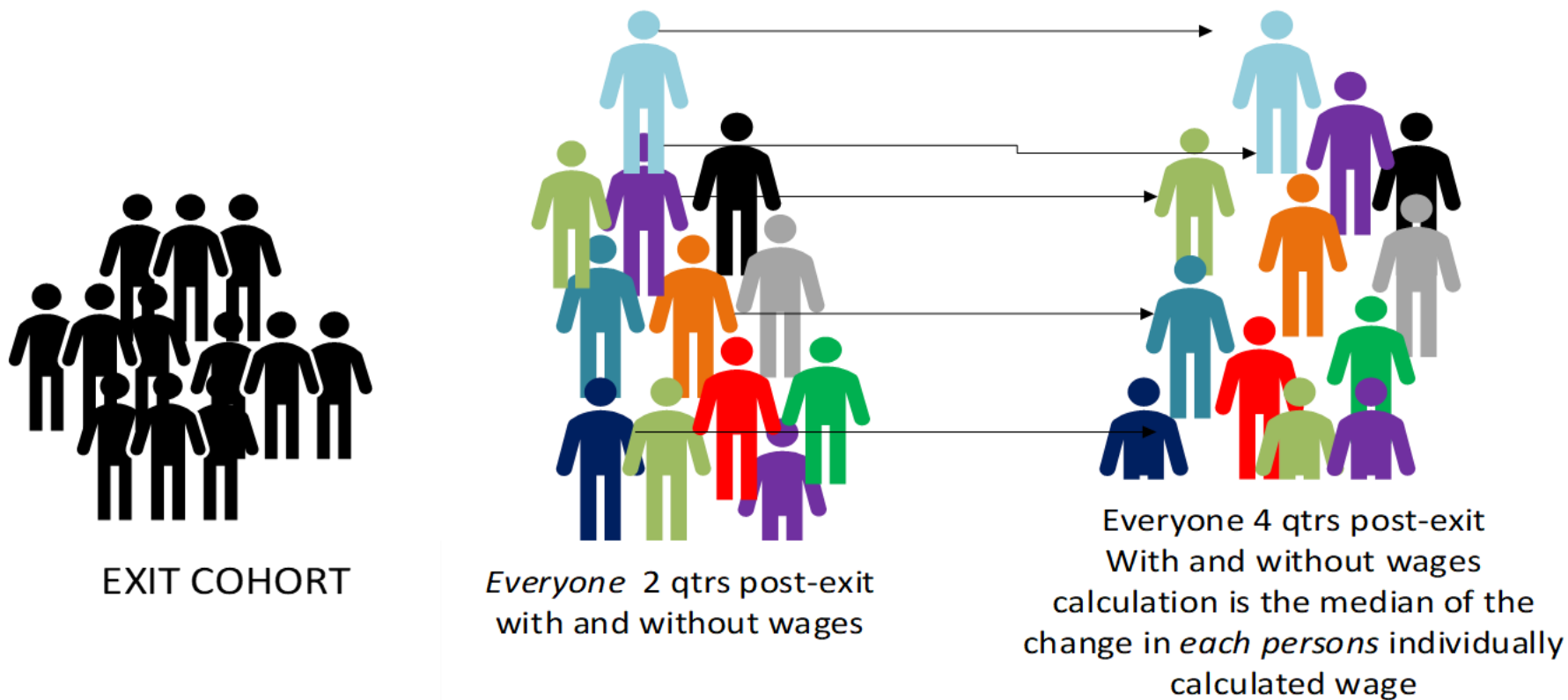


Median wage 4 qtrs post-exit  
*for those with wages* (even if  
they aren't the same people as  
those with wages in the 2nd qtr)



# New Ways to Look at Wage Progression

- The individual method
  - Piloted in the TDC Applied Data Analytics course



# New Ways to Look at Wage Progression

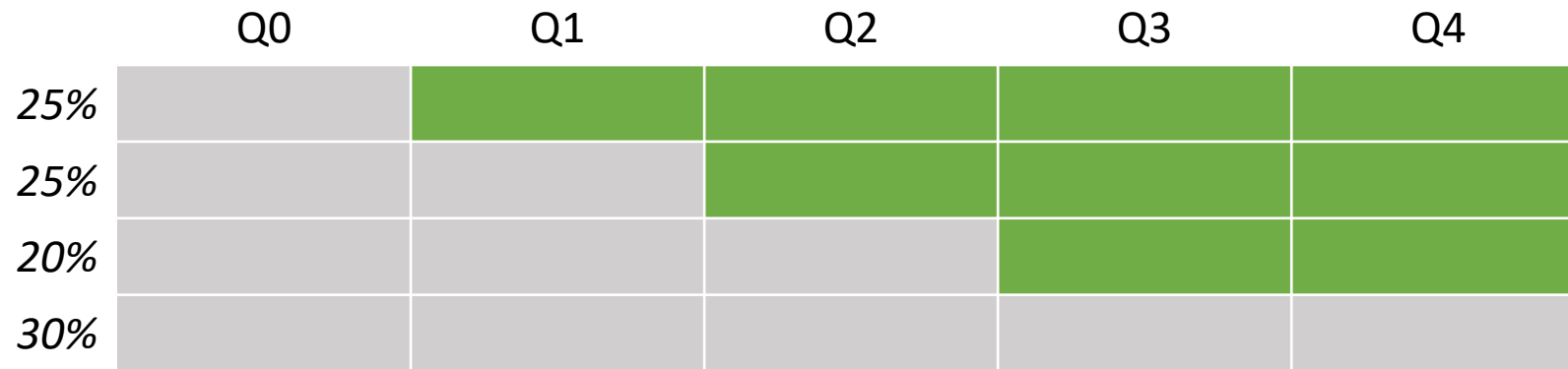
Many of our leavers never have wages in the 8 quarters following exit...

	Quarter of Exit	Exit + 2 Quarter	Exit + 4	Exit + 6	Exit + 8	Change, 4th quarter to 8th quarter after exit
Person 1	50	60	55	40	45	-10
Person 2	0	0	20	35	45	25
Person 3	15	55	60	45	0	-60
Person 4	20	35	45	55	60	15
Person 5	0	0	0	0	5	5
Person 6	0	0	0	0	0	0
Person 7	0	0	0	0	0	0
Person 8	0	0	0	0	0	0
<b>Median change:</b>						<b>0</b>

*Note: Mock data used*

# New Ways to Look at Wage Progression

- Many of our leavers never have wages in the 8 quarters following exit...
  - But we think that is an outcome we'd like to capture...
- ...so how can we move beyond median as the sole measure?
- Deciles
  - Mapping of wage progressions



*Note: Mock data used*

# New Ways to Test Theories with Statistical Modeling

- How can we think about place mattering for our clients?
- Next steps for a regression model, Chapin Hall coaching
- Cultural shift for CDSS: in-house statistical work that isn't siloed



# New Ways to Test Theories with Statistical Modeling

## Dependent Variables

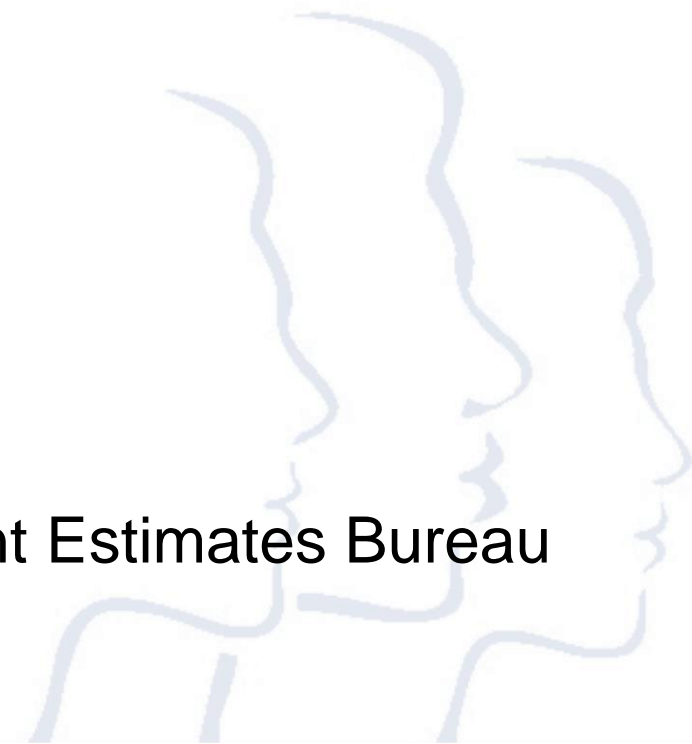
- Wages within 8 quarters of exit, yes or no
- Wages above a poverty threshold, yes or no

## Dependent Variables

- Individual variables
  - Demographics
- Place variables
  - Social determinants of health index for ZIP
  - Per capita government spending by ZIP
- Employer variables
  - Size of firm
  - Turn-over rate

# Thank you!

Caroline Moyer, MSW  
Research Data Analyst II  
Research Unit, Family Engagement and Empowerment Estimates Bureau  
California Department of Social Services  
[caroline.moyer@dss.ca.gov](mailto:caroline.moyer@dss.ca.gov)





# “TANF DATA COLLABORATIVE: HOW STATES ARE BUILDING DATA ANALYTICS CAPACITY”

Britany Orlebeke

New York State

Office of Temporary and Disability Assistance



**TANF DATA**  
**COLLABORATIVE**

# NEW YORK STATE CONTEXT

- 57 diverse districts (“Rest of State”) and New York City
- Diverse on many levels: economic opportunities, district investments of time and effort, staff motivation, strength of community partnerships, service and program opportunities
- Effectively no time limit on benefits
- ROS and NYC have different data systems and coding

# GOAL: DATA DRIVEN DECISION MAKING

1. Make your team of both policy experts and researchers with data design and data creation skills
2. Know your data
3. Organize it well (events and spells)
4. Know your question(s). WRITTEN questions focus and guide every step in the research
5. Pick the right population to answer your question (point-in-time, entry cohort, exit cohort)

# QUESTION: What % of clients have payment experiences with and without gaps?

Illustrate the Concept:

	2018												2019											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No Bridge/All Spells				1				2					3											
Bridge/3+ Month Spells								1																

Use the spell file to get the answer:

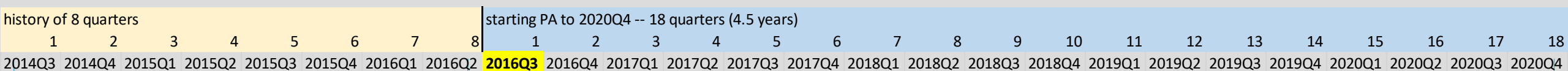
About 20% of spells had gaps and 80% did not.

About 10-12% of spells in any given cohort were 1-2 months long off by themselves.

# QUESTION: How can OTDA help local districts identify early on persons who will be long-term benefit recipients?

We program variables capturing individual history up to that point.

We observe the cohort that entered in the 3rd quarter of 2016 over a window that extends to the end of 2020.

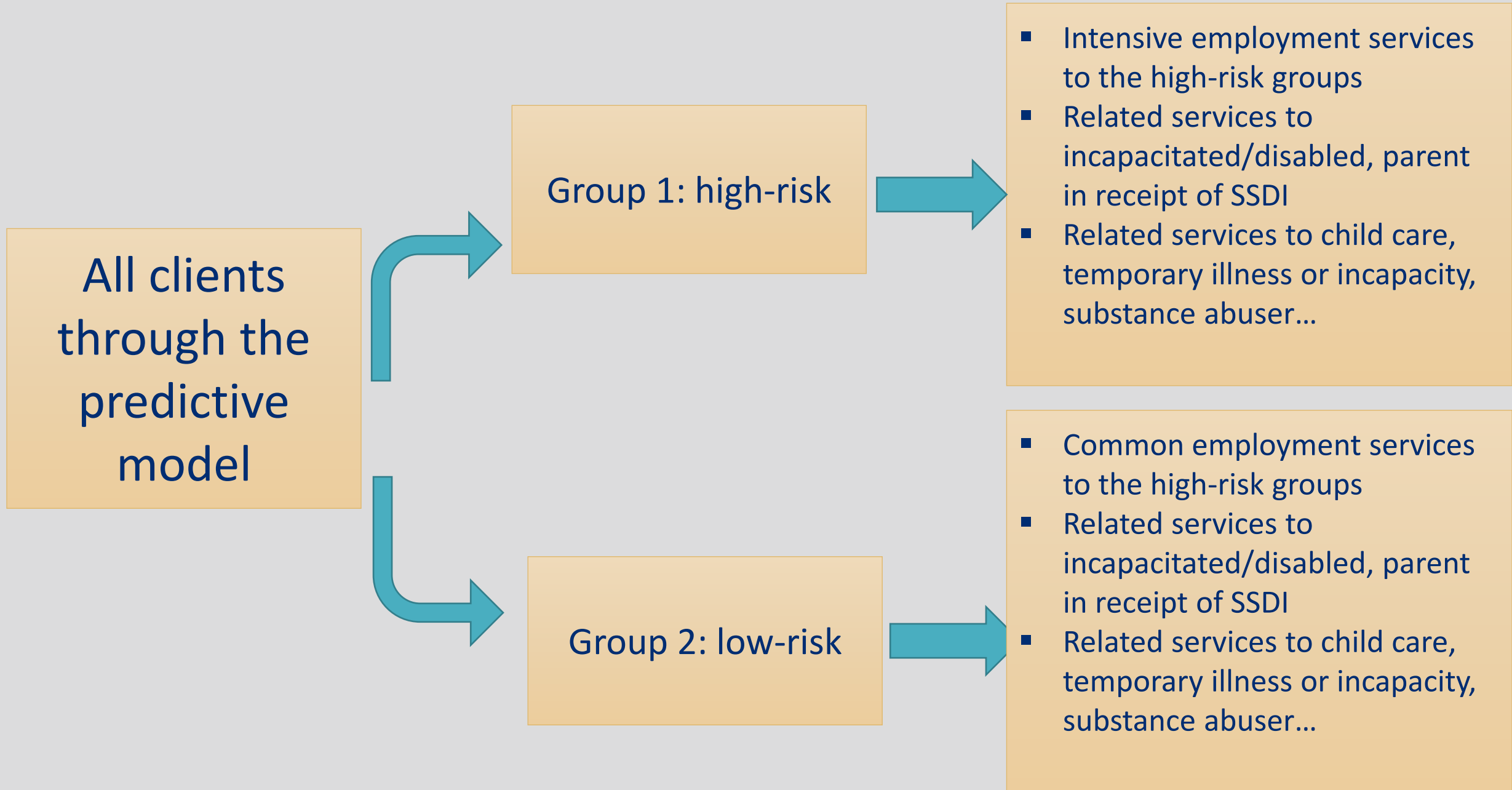


WRS (earnings) data for 2 Years Pre-Opening

Window of 4.5 Years after Opening

PA benefit data since 1996

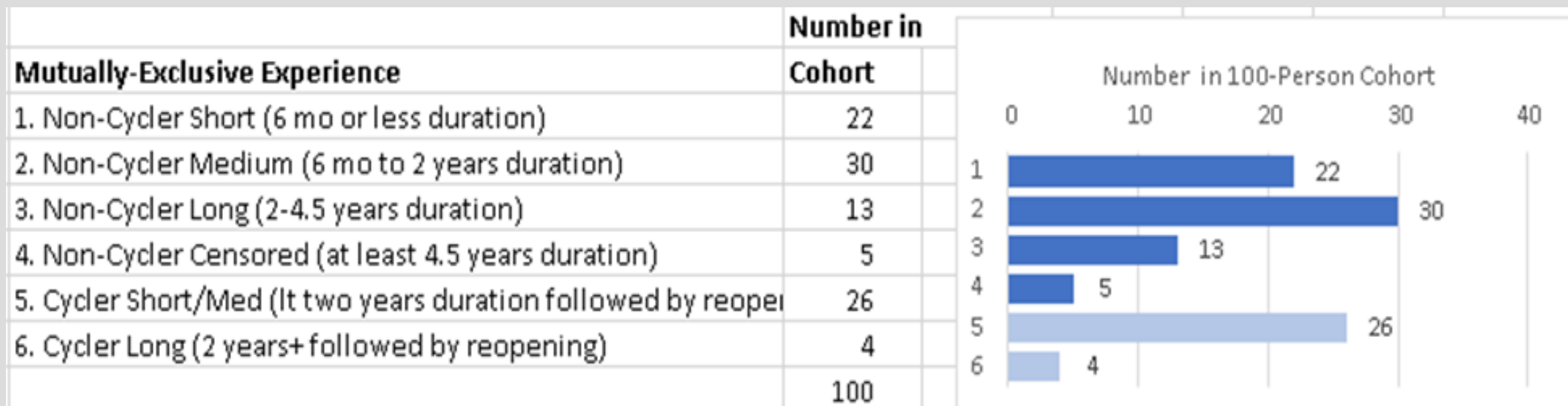
# POSSIBLE ASSIGNMENT PROCESS DESIGN





# QUESTION: What can our GAP 3 spell file tell us about public assistance use patterns over this period?

## Distribution of a variable that combines observed duration and reopening patterns



# REVIEW SHARED VOCABULARY: SIX CONCEPTS

1. **COHORTS:** We watch what happens over time to a group of cases that start in the same time period.
2. **SPELLS:** We populate a row of data about a period of time on assistance with information before, during, and after the spell.
3. **GAP:** To define a spell, we have to say what makes an ending. A gap of 1 month? 3 months?
4. **CENSORING:** We observe what we can about the spell up until the “censor date” – the date after which we don’t know what will happen.
5. **THE WINDOW** of observation: For example, this analysis uses a window of 4.5 years to observe what happens.
6. **START, DURING, END:** Variables in longitudinal analysis must fit into one of these categories.

# A WORD ABOUT NYS JUST PRIOR TO THE TDC PROJECT

In 2019, OTDA made investments in:

- ✓ New staff (Program Evaluation and Data Analytics Unit, currently 3 staff, 2 in 2019 and 1 in 2020) within BDMA
- ✓ Data sharing with NYS Department of Labor for quarterly, individual-level UI wage data for PA population
- ✓ New software (SAS) within BDMA which has the capability to work with large, historical datasets (hundreds of millions of records)

## WHO WERE THESE CLIENTS? OF THE 100 ADULTS WHO STARTED RECEIVING PA BETWEEN APRIL-JUNE 2016...

- ✓ *Most of these adults –  $\frac{3}{4}$  - had received PA before as adults, and half had received at least 24 months of assistance.*
- ✓ *Almost all of these adults were under 50 and about half were in early to mid adulthood. One in five were married, and a small - - but not very small number -- were pregnant. Of the single adults, most were women.*
- ✓ *Almost half of these adults lacked even a high school degree. Most of these adults were citizens in private rent housing.*
- ✓ *Most people in this cohort show no, inconsistent, and low wages in the two years prior to starting benefits in the April-June 2016 quarter.*

# MORE ON EMPLOYMENT HISTORY OF THE 100 ADULTS...

## Counting quarters and patterns...

- **40** did not appear at all in the 8-quarter history of UI wages. **53** did not have consistent earnings (at least 3 three consecutive quarters) in the 8-quarter history
- **13** had WRS wages in all 8 quarters

## Summarizing earnings...

- **20** earned wages totaling at least 50% of the poverty threshold in the 8-quarter history

# CONCLUSIONS

✓ Using the sum of historical wages with reference to the poverty threshold performs better

THAN

✓ using total number of full quarters worked performs better

THAN

✓ using total number of quarters worked

## NEXT STEPS

- Continuing to build and review predictive models to choose best models using performance measures like “Area Under the Curve” and “Receiver Operating Characteristic”
- Adding new explanatory variables: improves performance or not?
- Identifying target populations



UTAH DEPARTMENT OF  
**WORKFORCE  
SERVICES**

**Nycole Tylka**

Assistant Director of Program and Training  
Workforce Development Division



WHAT ARE THE VARIOUS

**FACTORS**

AND SERVICES

THAT ASSIST TANF

**FAMILIES**

IN BECOMING ECONOMICALLY

independent and lower the likelihood of needing  
assistance in the future?



# Data and Methods



# TANF EXITERS IN 2011 FOLLOWED THROUGH 2013



## GENDER

**25%** Male



**37%** Female

**36%** Total

% of those that  
Return

## DEMOGRAPHIC INFO

**30**   **31**   Average Age

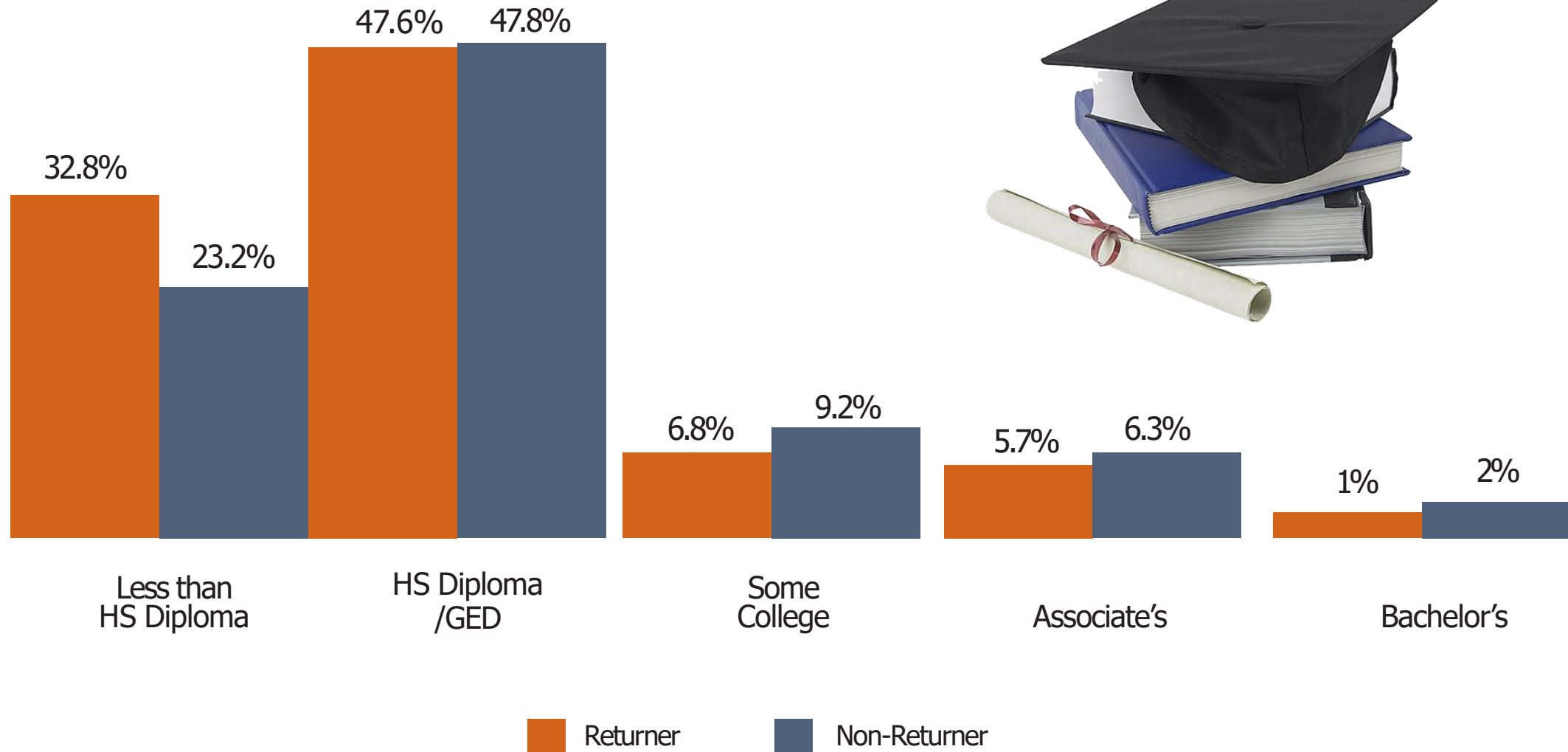
**27**   **30**   Median Age

**2.8**   **2.9**   Average Household Size

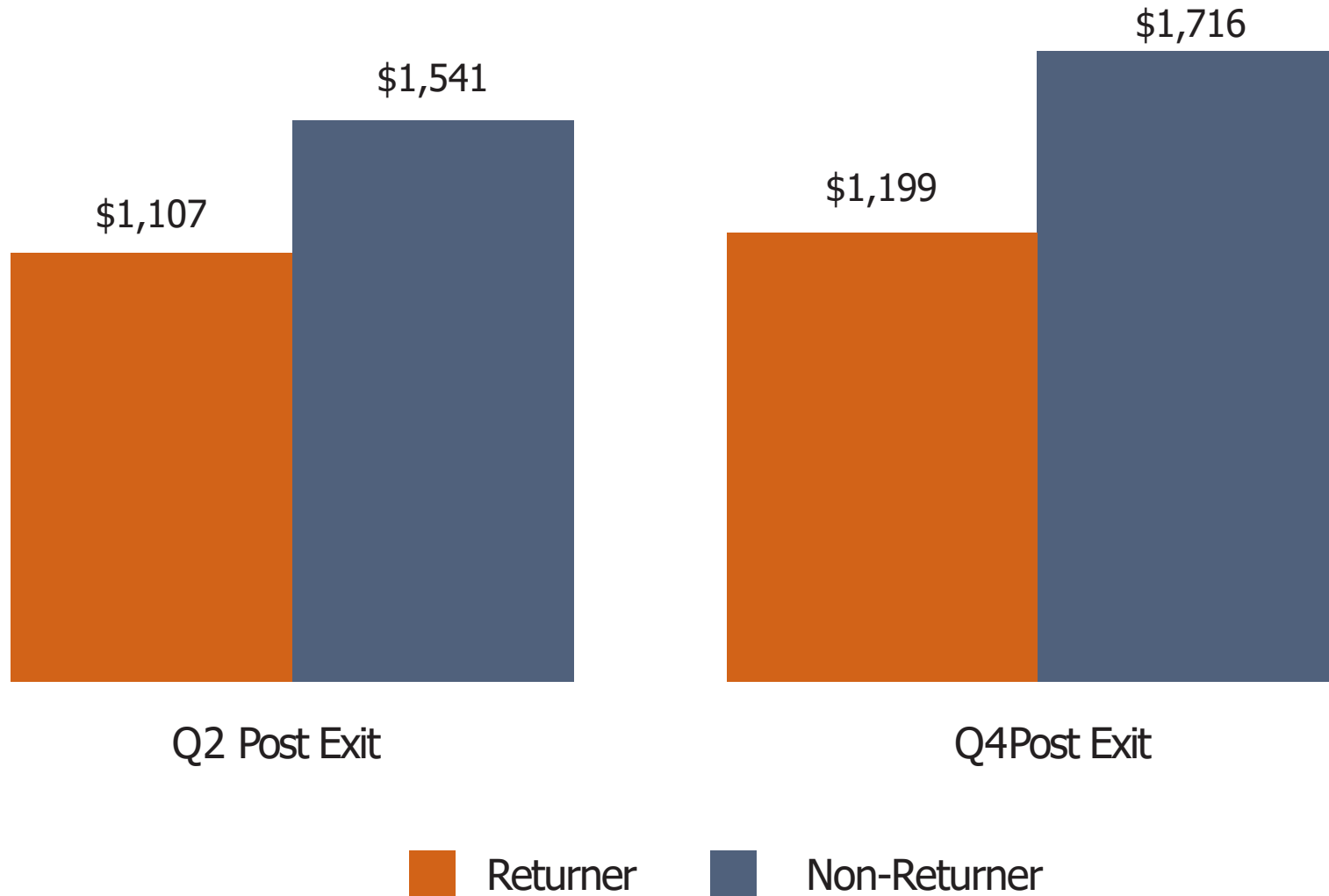
**3**   **3**   Median Household Size

Returner   Non-Returner

# EDUCATION LEVELS OF EXITERS



# WAGES POST EXIT





# Contact Info

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TANF DATA  
COLLABORATIVE

**Using data to improve family outcomes**

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